



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

**GENERAL LIBRARY
UNIVERSITY OF MICHIGAN.**

**THE
Hagerman Collection**

**OF BOOKS RELATING TO
HISTORY AND POLITICAL SCIENCE**

**BOUGHT WITH MONEY PLACED BY
JAMES J. HAGERMAN OF CLASS OF '61**

**IN THE HANDS OF
Professor Charles Kendall Adams**

IN THE YEAR

1883.

HA

1

1887

J8

22334

JOURNAL
OF THE
STATISTICAL SOCIETY
OF
LONDON.

(FOUNDED 1834.)

VOL. XXI.—YEAR 1858.

LONDON:
JOHN WILLIAM PARKER AND SON, 445, WEST STRAND.

1858.

NOTICE.

THE Council of the Statistical Society of London wish it to be understood, that, while they consider it their duty to adopt every means within their power to test the facts inserted in this Journal, they do not hold themselves responsible for their accuracy, which must rest upon the authority of the several Contributors.

CONTENTS.

	Page
Report on the International Statistical Congress, held at Vienna, 1857. By SAMUEL BROWN, F.S.S.	1—17
On the Economical, Social, Educational, and Political Influences of Competitive Examinations, as Tests of Qualifications for Admission to the Junior Appointments in the Public Service. By EDWIN CHADWICK, C.B.	18—51
On the Annual Fluctuations in the Number of Deaths from Various Diseases, compared with like Fluctuations in Crime, and in other Events within and beyond the Control of the Human Will. By WILLIAM A. GUY, M.B., Cantab., Fellow of the Royal College of Physicians; Professor of Forensic Medicine, King's College; Physician to King's College, Hospital; and one of the Honorary Secretaries of the Statistical Society	52—86
On the Ages of the Population in Liverpool and Manchester. By J. T. DANSON, Esq., Barrister-at-Law	87—93
The Apprenticeship System in reference to the Freedom of Labour. By JAMES ROBERT NAPIER.....	94—97
Quarterly Returns, Oct., Nov., Dec., 1857	98—114
Twenty-fourth Anniversary Meeting of the Statistical Society. Session 1857-58	115—120
Notes on Public Works in India. By COLONEL SYKES, F.R.S., M.P. ...	121—155
Metropolitan Railway Terminal Accommodation, and its Effect on Traffic Results. By WILLIAM ARTHUR WILKINSON, Esq.	156—168
On the Present State of the Administration of the Relief to the Poor in the Metropolis, and the Charge of the Poor Rate thereon. By W. G. LUMLEY, LL.B., Barrister-at-Law, Assistant-Secretary of the Poor Law Board, and one of the Honorary Secretaries of the Statistical Society.....	169—197
Thos. Tooke, F.R.S.	198—201
Quarterly Returns, Jan., Feb., Mar., 1858	202—222
On the Statistics of Indian Revenue and Taxation. By FREDERICK HENDRIKS	223—296
Tables relating to the State of the Population of Great Britain at the Census of 1851, with a Comparative View, at the different Ages, of the Population of France; also a Comparative Return of Births and Deaths, 1838-1854. By CHARLES M. WILLICH, Actuary, University Life Assurance Society. With some Remarks, by way of Preface, by E. T. SCARGILL, Assistant-Secretary	297—307

	Page
On the Present State of the Administration of the Relief to the Poor in the Metropolis, and Charge of the Poor Rate thereon. By W. G. LUMLEY, LL.B., Assistant-Secretary to the Poor Law Board, and one of the Honorary Secretaries of the Statistical Society	308—338
Report on the Proceedings of the Congrès International de Bienfaisance, held in Frankfort-on-the-Maine, September, 1857. Drawn up for the Statistical Society of London, at the request of one of their Honorary Secretaries. By HENRY ROBERTS, Esq., F.S.A., one of the Vice-Presidents of the Congress	339—344
Proceedings of the Statistical Society.....	345, 346
Quarterly Returns, April, May, June, 1858	347—368
Chronicon Pretiosum Suathense; or Lists of Prices of Various Kinds of Agricultural Produce, and of other Articles, in the Ecclesiastical Peculiar of Snaith, in the West Riding of Yorkshire, in the Sixteenth, Seventeenth, and Eighteenth Centuries. Compiled from the Probate Records of the Peculiar:—by THE REV. CHARLES BEST ROBINSON, M.A., of Withernwick, near Hull, Fellow of the University of Durham	369—420
Comparative View of the Money-Rate of Wages in Glasgow and the West of Scotland, in 1851, 1856, and 1858. By JOHN STRANG, LL.D.	421—426
On the Industrial and Sanitary Economy of the Borough of Leeds, in 1858. By ROBERT BAKER, one of the Inspectors of Factories	427—443
On the Recent History of the Crédit Mobilier. By WILLIAM NEWMARCH	444—453
Notes on Indian Fibres, illustrated by Prepared Specimens. By MR. J. H. SADLER. Communicated by COLONET SYKES	454—456
On the Progress of Free Trade on the Continent. By M. CORR VAN DE MAEREN, Chairman of the International Free Trade Association of Brussels	457—459
Notes on Self-supporting Dispensaries, with some Statistics of the Coventry Provident Dispensary. Communicated by CHARLES H. BRACEBRIDGE, Esq., Atherston Hall, Warwickshire	460—463
The Sewing Machine in Glasgow, and its Effects on Production, Prices, and Wages. By JOHN STRANG, LL.D.	464—467
Twenty-Eighth Meeting of the British Association for the Advancement of Science, held at Leeds, 22nd—28th September, 1858.—Section (F). Economic Science and Statistics.....	468, 469
Quarterly Returns, July, Aug., Sept., 1858	470—490
Index	491—502

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY.

MARCH, 1858.

Report on the International Statistical Congress, held at Vienna, September, 1857. By SAMUEL BROWN, F.S.S.

[Read before the Statistical Society of London, 17th November, 1857.]

IN venturing to lay before the Members of the Statistical Society of London a Resumé of the proceedings of the Third International Statistical Congress, held this year in Vienna, I am conscious that I labour under the great disadvantage of having been preceded by M. Leone Levi on two similar occasions. The lucid and eloquent language in which he has given the Report of the first Congress, held at Brussels, in 1853, and of the second, held at Paris, in 1855, cannot fail to recur, on this occasion, to the recollection of any of our Members who either had the pleasure of being present when the Papers were read, or to read them in the pages of the *Statistical Journal*. The absence of M. Leone Levi at the recent Congress will, I hope, be my excuse for bringing before you this very brief Report of its proceedings. The interest which they excited well merits a better historian, and more ample space.

At the two previous Congresses, in Brussels and in Paris, so many subjects were brought forward for discussion, that it might almost have been presumed that the programme of the Congress just held at Vienna would be of inferior interest. Within the last few years, however, the range of statistical inquiries has been so much extended,—so many questions of the highest importance to the progress of civilization and the well-being of society, have forced themselves on our notice; and so rapid has been the improvement in the mode of collecting the Government Statistics of different kingdoms and countries, that the difficulty was rather to condense than to enlarge the programme for the Third Congress at Vienna. This task

was most ably performed by the Committee of Organization, the President of which was his Excellency Ritter von Toggenburg, the Minister of Trade, Commerce, and Public Works; the Vice-President, Baron von Czoernig, head of the Statistical Department in the Ministry of Commerce; and which comprised amongst its Members some of the most celebrated names in the Judicial, Financial, or Commercial Administration of the Austrian Empire.

As the Programme was framed in reference to several unsettled inquiries, which stood over from the previous Congresses, as well as several new subjects which have lately assumed considerable importance, and as, moreover, the Programme, after undergoing discussion in the different Sections, was, with some slight alterations, passed at the General Meetings of the Congress, it may be well to touch upon the leading subjects which it brought under review.

SECTION I.—*Statistics of Mortality.*

At the First Congress a wish was expressed that a Nomenclature of Diseases, uniform for all countries, should be prepared and recommended for adoption; and it was referred to Dr. Farr, and Dr. Marc d'Espine, of Geneva, to report thereon. At the Second Congress the reports of both these gentlemen were considered, and a Nomenclature decided on and recommended to the acceptance of the Delegates of the different Governments. At the same time it was strongly urged that, in every State, certificates of the causes of death should be required from the medical men who attended the deceased; that all the deaths should be verified by medical men; that forms for obtaining the required particulars in a uniform manner should be drawn up and furnished to them; and that, in analysing the returns, the assistance of one or more medical men should be secured by the Governments. To the Third Congress also was referred the subdivision of diseases as causes of death into epidemic, endemic, and sporadic, or into acute and chronic.

The Report of this Section, presented by Dr. Helm, Director of the General Hospital at Vienna, expresses the intention of the Government of Austria to ascertain, with as much exactness as possible, the Causes of Death in the Empire, so that the materials gathered may be available for statistical inquiries on the principles to be adopted at the present Congress. Three forms are given to be filled up by the medical man who certifies the cause of death: 1. In the case of stillborn; 2. In case of suicide; 3. In case of death by disease. The last form comprises an important inquiry into the origin of the malady, and the first, also, as to the prevailing maladies to which the parents may be subject.

The second division of subjects in this section related to the Statistics of Establishments and Societies devoted to the Succour of

the Sick and Infirm, confining it, however, to those not of a mutual character. Societies for Mutual Relief in Sickness had been already considered at the Paris Meeting. The facts recommended to be inquired into are, as nearly as possible, in the same form as those of Mutual Societies, in order to give an opportunity of comparing the results of public benevolence with private relief. Statistics of the Infirm, also, form a subject of great importance to society; since, whether maintained in public establishments, and at the public expense, or supported by private charity, they equally represent a class of individuals who form a charge on the wealth of a country and diminish the produce of labour. In this class may be comprised the blind, the deaf and dumb, the cretins, insane, epileptic, or maimed persons. Dr. Seligmann pointed out that these natural infirmities also have direct relation with various maladies which, either at uncertain periods, or in particular places and seasons, ravage a population; thus the number of the blind may vary with the prevalence of small-pox, the maimed with scrofula, and cretinism with certain endemiological causes.

The Statistics of the Insane have received more attention in France and in Belgium than in most other countries. Statistical tables have been kept very exactly since 1853 in the great Hospital for the Insane at Vienna, but not formed on any general system; and it is very much to be desired that the observations on this subject, in various countries, should be simultaneous, and on a uniform principle. The tables prepared for the collection of this class of facts were by Dr. Riedel, and those on the Statistics of Epidemics by Dr. Seligmann, who recommends also enlisting in such a work the efforts of private practitioners in filling up and returning forms of a simple but comprehensive character, not merely giving the lists of patients, but distinguishing those who are transferred to public hospitals, and those who are cured. Such returns would, when put together, prove of advantage both to medical science and to the public authorities, in showing when and where the necessary regulations, sanitary or otherwise, should be carried into effect.

SECTION II.—*Judicial Statistics.*

Very elaborate tables, subdivided into numerous heads of inquiry, were presented, with a report, by M. le Chevalier Antoine Hye Glumek, Ministerial Councillor in the Ministry of Justice. The Members of the Section felt that without an approach to a uniform and general legislation, the efforts to produce a comparison of the Statistics of the Judicial Administration of different Countries could not lead to useful results. In regard to one of the questions in the programme—the preparation of a Statement, as detailed as possible, of all the Acts punishable by the Tribunals in virtue of the Laws of each State,

specifying the legal definition of each of the special classes, and the punishment applicable to every crime—time did not allow of their putting themselves in communication with the eminent legal authorities of every country, and obtaining the requisite documents for its solution. They therefore merely referred to the new Penal Code of Austria of 27th May, 1852, in which the offences to be tried before the tribunals of Austria have received legal definitions so precise, and the punishments applicable to each of these offences have been so well specified, that it is considered scarcely possible to define them in a manner more concise or clear. The Section recommended, however, that the Congress should nominate some distinguished jurist to prepare, in the interval between the present and the following Congress, a comparison of the Penal Laws of every State, to establish the legal definition of the acts punishable by the laws of each State, with the punishments attaching to them, and to trace a parallel of the definitions which most clearly resemble each other, so as to ascertain the points of comparison in the statistical results of the penal procedures of different countries. A portion of this work should be devoted to a comparative table of the Treaties concluded between different countries for the reciprocal extradition of criminals. Besides the Austrian treaties of this character, which existed with Parma, Prussia, the kingdom of Naples, and Tuscany, others have recently been concluded by Austria, in 1852, with Holland; in 1853 and 1857 with Belgium; in 1854, 1855, with all the States of the German Confederation; in 1856 with the Swiss Confederation; in 1855 with France; and in the same year with Modena; and in 1856 with the United States of America. Negotiations are still going on with other States for the same purpose.

Another question in the programme related to the preparation of a plan for exhibiting the Statistics of Civil Law, as suggested at the preceding Congress; and as great improvements had recently been effected in the returns made by the Judicial Administration of Austria, the Section considered it their duty to lay these forms before the Meeting. They have, in fact, been prepared with special reference to the views set forth at the Paris Congress; and having received the approbation of the Ministries of Justice and of Commerce, were about to be brought into general use, modified, however, if necessary, by the present Congress, so as to admit of comparison with the Judicial Statistics of other nations. The same remarks apply to the Statistics of Criminal Legislation. The custom of recording the facts relating to Penal Legislation has existed in Austria since the Penal Code of 3rd September, 1803, but they were confined to the particulars absolutely necessary, and only embraced the administration of justice in those parts of the Austrian Empire where this law was in force. In 1850 the Judicial System was reorganised, and

the statistical details of the administration of justice greatly improved; but the different provinces of the Empire coming under the new arrangements at different dates, it was not possible to present the review of facts for the whole Empire on any uniform plan. It was not till 1856 that the administration of justice was regulated on one and the same system in the different provinces, and the benefit of a uniform legislation extended to all parts of the Imperial Monarchy. The statistics of criminal legislation, according to the Penal Code of 27th May, 1852, in this year, therefore, begin upon a new basis, and will, in a few years, open up a vast field of observation and research on this most important and, at present, embarrassed subject.

The second great question referred to this Section was the Statistics of the Distribution of Real Property, and its Burdens, and the Annual Variations occurring therein. There are various ways of estimating the distribution of real property, but two only were considered in the Report: (1) The personal description of the proprietor, or the description of his legal title; and, (2) The extent of property possessed by the individual owner. The former comprises the ancient distinctions of Tenure, but which, as they are now changing to so great an extent in most countries of the world, render it by degrees less advisable to retain this form of subdivision in the collection of the facts, viz., the Classification as Property of Nobles, of Citizens, of Peasants, of the State, Communes, Corporations, Ecclesiastical Bodies, Charitable Societies, Private Societies, and of Individual Proprietors. The other mode of classification by the Extent of each property requires the assumption, either of the unit of land measure in each country, or of some general unit of measure, such as the hectare, which might be applicable to all countries. The classification may also be effected by the value of property belonging to each possessor, or the gross and net produce liable to taxation. The causes which influence the relative distribution of Land under these heads would be very difficult to arrive at. The character of the inhabitants, the nature of legislation, the formation of the surface and fertility of the soil, the kind of cultivation, the density of the population, and their physical, moral, and intellectual condition, with many other causes, may all concur in producing the facts that will be observed, or the fluctuations of each year. The question, again, of the best mode of Registration, is one of great difficulty, unless all the facts could be obtained and combined with the registration of title. The Landtafel of the kingdom of Bohemia is described as one of the most ancient institutions of the latter kind existing in our days. The books record a description of the property, and of its superficial character, the documents which constitute the title, the legal limitation of the right of disposal, where any such exists, and the documents which establish any mortgage or burden upon it. If such

books existed in all countries, the statistical facts relating to real property would be obtained with great facility, including the changes in value, and in the relative extent of the property held by individuals. In combination with this subject, and especially in reference to the products of land, the Cadastre, or the true measurement and description of the soil, becomes of the utmost importance; but the question is too wide to notice further in this place.

In Austria the institution of the "*Livres Terriers*," or Land Registers, exists in all the German and Slavonian Provinces, with the exception of the Tyrol and Vorarlberg, of a part of the Circle of Goritz and of Istria, of the ancient territory of Cracow (in Galicia). In Hungary and the Voivode, including the Banat, in Croatia and Slavonia these registers are about being introduced, and the work will be finished in a few years. In Transylvania the Registration of Charges already exists.

The Cadastre extends throughout the Empire, but in different forms. In ancient Lombardy the Milanese Cadastre has existed since the year 1755, and is the oldest institution of the kind, and from it the others have sprung. The new Cadastre is entirely introduced in most parts of Austria. In Bohemia the measurement is finished, the valuations are now proceeding; in Galicia the necessary operations are being proceeded with; in the ancient Venetian part of the Lombardo-Venetian Kingdom the new Cadastre is, for the most part, in full force; in a part of the territory of Bergamo, and in the province of Sondrio, it is not yet finished; and in the Tyrol they are engaged in the labours required for its completion.

By these means the statistics of this subject in Austria show, (1) The number of proprietors, distinguishing those who have houses from those who have not; (2) The quantity of land cultivable, (cultivated and not, such as wood and pasture,) and uncultivable, and the superficial extent of each kind of culture; (3) The quantity of productive land in fallow, or in process of being tilled, and the quantity of each kind of culture,—to each proprietor possessing a house or not; (4) The number of parcels of land, and their superficial contents, in a square mile, and to each proprietor; (5) Classification of the proprietors of land possessing a house or not, according to the net produce of their land by the Cadastre; (6) The alterations each year in the state of each property (except the kind of culture).

SECTION III.—*Financial Statistics.*

This also was a question suggested at the Paris Congress, in which was urged the necessity of some uniformity in the financial Statements of all Countries; such as Duties Levied, Cost of Collection, the different Sources of Revenues of a State, the Public

Domains, Institutions of Credit, the division of the Expenses and the Public Service into General, Provincial, and Communal, the Public Debt, &c., so that each should give the requisite particulars, though the resolution did not contend for an absolute similarity of form, which might be liable to objection. The Committee, which included some of the first Statistical Financiers in theory and practice, set themselves to arrange the items of the different Receipts and Payments shown in a budget,—to classify them under heads and subdivisions, and illustrate them with notes. To try the result of their labours they applied the form to the general budgets of Austria, France, and Prussia; and, with some slight modifications, it was found to answer perfectly. Still, however, they discovered an important source of error in comparison, difficult to be removed or cleared up; that is to say, the very great variation in the proportion of the receipts and payments which Governments leave to the care of communes, corporations, or public institutions. The expenses of public religious worship, schools, benevolent establishments for the relief of the poor, the property and revenues of the Crown, pensions to public functionaries, may be granted on widely different principles which, if unexplained, evidently leave the comparison with other countries unjust or unsatisfactory. The part received and paid by the State, and the part left to the management of the Public, ought to be capable of being distinguished, to arrive at the real truth. One very important table, however, was added by the Committee, which they call "*Tableau de la fortune de l'État*," showing the funds and property of the State, which, in fact, is equivalent to a balance-sheet at the close of the financial period, and proves to what extent the receipts and expenses, as compared with the last balance-sheet, have added to its wealth, or left it deeper in debt. No doubt many of the funds and properties required to be valued may be very difficult of estimation and comparison, such as the Public Debt, or Treasuries of Art, like the Vatican, the Louvre, the "Green Vaults" of Dresden, or the British Museum. Others it may be thought imprudent to make public, such as the value of arsenals, military or naval stores and ammunition. But the principle is sound; the form may be preserved, and the items objected to, left blank.

SECTION IV.—*Statistics of Industry.*

Under this head a very elaborate Report was presented. The Committee, to whom as originally formed, had been joined several men distinguished in particular branches, were met by a preliminary difficulty,—that of determining what is meant by a Raw Material, as opposed to an Industrial Product, especially in the case of the produce of agriculture or of mines. They finally decided that a natural product preserves still its character of a raw material, if it requires

from the producer some mechanical elaboration solely for the purpose of making it a general object of sale; but, on the contrary, any other mechanical elaboration converts it into an industrial product. Thus, corn threshed in a barn, hemp dressed, the trunk of a tree cut down, silk wound, may be considered as in the first category, the mechanical application being made by the first producer. Admitting the want of an absolutely fixed principle in that case, they proceeded to enumerate Raw Material under the same form of classification as was applied to industrial products divided into the three kingdoms of nature, with sub-divisions according to the uses to which such materials are applied in the different branches of industry, so as to bring the comparisons closer together. The difficulties of classifying the products of industry on any scientific system have been already experienced in the various exhibitions which followed that of 1851. The Industrial Exhibition of Switzerland, in May, 1856, is the only one which adopted a division not differing materially from the plan proposed by the Committee. It would be interesting to explain the system adopted for the classification of industrial products a little more in detail, but space does not permit. It comprises, in eight groups, the whole of the industrial products discussed, and proceeds in a natural order to the products of inorganic materials arising from mechanical application, immediately follow machines considered as the means of industrial production; then follow chemical products arising out of organic and inorganic materials; then mechanical products from organic materials; and, lastly, products which are employed in the industrial arts. These 8 groups are divided into 34 classes, and 185 sub-divisions.

The second labour of the Committee was to ascertain the means of obtaining returns of the Quantity and Value of the produce in every branch of industry, so as to present the results of the labour of the whole country. Considering that these must depend on machinery, on the raw materials, on the labour of man, in addition to the capital required for the purchase of the raw materials, and the wages of the workmen, a form of Table is given with the view of obtaining these general returns brought into one point of view. It comprises the motive power and tools of labour; the workpeople, distinguishing age and sex; the number of days' labour in the year, and of hours' in the day, and their wages; the consumption of coal or other fuel for machinery; the quantity of raw material, or other form of product to be worked; and the nature, quantity, and value of the product obtained.

The method of obtaining accurate information on these points, looking at the jealousy and prejudices to be encountered, and still more how to correct returns, which may be sent in erroneous either through wilfulness or ignorance, are wide questions on which much

discussion must be held before any solution can be given. No doubt the task will become easier as the real object of statistics is better known.

SECTION V.—*Statistics of Public Instruction.*

The information required under this head is of a much more simple character, depending principally on the Classes of Public or Private Schools, the details under each being much of the same character. The tables have reference to the number and classes of scholars, the teachers, the nature of instruction, receipts and expenses, &c. The difficulty, however, of Statistics of Education will always be to express in tables, not the number and classes of scholars receiving instruction, but the Nature of the instruction imparted, and the forms will have to be greatly modified to afford any just comparison of countries differing so much in their views and methods of public education.

SECTION VI.—*Relation of Statistics with the Natural Sciences.*

Although the study of nature may appear to be beyond the domain of statistics, there are certain portions which can be most usefully reduced to tabular forms, and without which, indeed, only general impressions would be obtained, and not accurate comparisons made with similar facts for other countries. They relate principally to the geographical, geological, or hydrographical features of a country, the state of the atmosphere, and the geographical distribution of animals and vegetables.

Two other subjects were referred to this section: the one, on the use of maps or charts to illustrate statistical results: the other on the ethnographical differences in the population of a state. The former presents many advantages, shewing at one and the same time, in forms or in colours, not merely the locality, but the intensity and movement of statistical observations of almost every kind. The latter was illustrated in a very remarkable map prepared and explained by Baron von Czoernig, showing the distribution of the various races which constitute the population of Austria. By a comparison of such maps, at different times, the encroachment of one race on the original territory of another, may lead to grave reflections on the influence thus exercised on the social, commercial, or intellectual condition of their neighbours.

Such being the nature of the Programme, and such the importance of the subjects for discussion, it would be readily imagined that when the Members of Congress assembled, their labours were of no light character. They were, however, rendered doubly interesting by the union of men of science and intellect from all parts of Europe,

bringing to bear on each of these grave topics their experience, and the results of their individual studies ; and stimulated by the social intercourse with friends who had assisted at the previous Congresses, or new acquaintances of high attainments and enlightened minds. The proceedings were conducted in German and French, all the Reports of the Sections being read in both languages, and discussions on important points translated from the former into the latter. Nearly all the Governments of Europe had sent their official representatives,—Russia, Spain, and Turkey, for the first time. In the course of the Sessions the Delegates of each gave a very interesting resumé of the progress and present position of Government Statistics in their respective countries.

The following Governments sent official delegates :—Anhalt, Bavaria, Baden, Belgium, Bremen, Brunswick, Denmark, Spain, France, Great Britain, Hanover, Hamburg, Lubeck, Mecklenburgh, Nassau, Norway, Netherlands, Portugal, Russia, Saxony, Saxe Coburg Gotha, Saxe Weimar, Sweden, Switzerland, Tuscany, Turkey, Wurtemberg.

There were altogether 487 Members of the Congress, of whom no less than 427 were Austrian, and of these 370 were inhabitants of Vienna. This fact alone would indicate that such a Congress must be productive of very great results to Statistics, were it only by the effect of stimulating so many to take an interest in the variety of subjects discussed, and to consider how they are treated in foreign countries.

The Session was opened on Monday, the 31st August, by the President of the Provisional Bureau, Baron von Czoernig, to whose indefatigable exertions and enlightened mind the progress of Statistics in Austria is in great measure due. Nor can the Foreign Members of the Congress easily forget the courtesy and attentions which they individually received from him during its whole continuance, nor the ability and eloquence with which he conducted the business of the Sections, or presided at the general meetings of the assembly. The Minister of Commerce, His Excellency Ritter Von Toggenburg, opened the proceedings in a short but powerful address, in which he assured the Members of the earnest endeavours of the Austrian Government to profit by all the deliberations of the preceding Congresses, thanked the Foreign Governments for sending so many distinguished men to assist in the harmonious work of devising means for the comparison of the Statistics of all countries, showed the vast importance of a uniform system of collecting facts relating to the social condition of the people, as bringing about, in the end, similarity of laws and social condition, and so preserving the peace and adding to the happiness and prosperity of all people ; and concluded by taking the opportunity to point out the advantage of an union of all the German States for objects of such vast utility.

The Provisional Bureau was then confirmed, whereby Baron von Czoernig became the president of the Congress, and the official representatives of the Foreign Governments were nominated vice-presidents. The remainder of the day was occupied by hearing the verbal Reports of the delegates of those governments which had not hitherto been represented at the previous Congresses. Daoud Effendi, for Turkey; Count Ribaldo, for Spain; Herr Freiherr von Reden, for Brunswick; Count Bernadsky, for Russia; and Herr Finanzrath Hopf, for the Grand Duchies of Saxe Coburg Gotha and Saxe Weimar, entered into very interesting details of the progress of government statistics in those countries.

On the following day these Reports were resumed, alternately with the Reports from the various sections; and amongst others, M. Baumhauer, for the Netherlands; Professor Aschehong, for Norway; Dr. Farr, who in the absence of Mr. Fonblanque through illness, had the arduous duty of representing both the commercial and population Statistics of Great Britain; (See Appendix A.) M. Legoyt, for France; Dr. Berg, for Sweden; M. David, for Denmark; Dr. Engel, for Saxony; M. M. Quételet, Visschers, and Heuschling, for Belgium; Herr Finanzrath G. Hopf, for Gotha, excited great interest by the able manner in which they epitomised the multitude of subjects which were comprised in the recent progress of Statistics in the countries which they represented. But the most elaborate statement was that made in the fourth Session of the Congress, by the president, Baron von Czoernig, on the improvements effected in the Statistical Records of Austria, since the meeting at Paris, in 1855, relating to Mortality, Railways, Trade, Justice, Savings' Banks and Assurance Companies, Statistics of the City of Vienna, &c. On the motion of M. Legoyt, received with acclamations, it was printed entire in No. 206 of the "*Wiener Zeitung*."

During the Congress, the sittings of which continued throughout the week, various resolutions were adopted, having reference to subjects for discussion at the next Congress. Amongst these may be enumerated—

1. To establish an International Commission for perfecting the Statistics of Penal Procedures, by inviting the Governments to communicate to this Commission the Summary of the Legislation in Force.
2. To collect the Statistics of Industry, by a programme for the Classification of Products, leaving out the raw materials and excepting the working of Mines.
3. To consider, at the next Congress, the Statistics of Literature.
4. Verbal Reports from Official Delegates to be repressed at the next Congress, and to be replaced by a General Report prepared by a Special Commission.

5. The adoption of a uniform programme of Medical Statistics.
6. To bring before the next Congress the forms for collecting the Statistics of Banks, of Institutions of Credit, and Joint Stock Societies of different States.

At the close of the sessions, Dr. Farr, the delegate of the British Government, proposed that it should be referred, as on the previous occasion, to the Committee of Organization, to name the place for meeting of the next Congress. The motion having been carried, he then, on the part of the British Government, in a pithy and eloquent speech gave a formal invitation for its assembling in London in 1859. (See Appendix B.) The invitation was received with loud applause from all parts of the crowded hall. We may hope that Great Britain will keep pace with Belgium, France, and Austria, not merely in the cordial and liberal reception of the delegates of foreign governments, but in profiting by the advancement in Statistical Science, to which these great meetings have already given rise. It would be an apt occasion to "set our house in order," and to bring under some special government department the publication of the valuable, but incongruous statistical documents so frequently put forth to the public. There is no country in the world where questions of so much importance have been discussed within the last few years as in this—none, in which such novel and grand conceptions have been put into practice—none, in which the public has taken so direct and ardent an interest in accumulating the materials for reflection, and for the utilization of the results. Witness the improvements in our Census and population statistics—the records of our Commerce, of our Railways, of our public institutions; witness the exertions and the writings of the Members of this Society, and of other private societies of a similar kind. All that we want is unity, harmony, combination in the labours of individuals, and in the Statistical Reports of the Government. Any effort to secure these important results will be well seconded by the co-operation, and rewarded by the applause of the country.

It is impossible to close this brief Report without a grateful record of the hospitalities and attentions which were received by the foreign delegates at Vienna from the representatives of the Austrian Government, and from every individual native of Austria, with whom they were brought into contact at the Congress. The Emperor of Austria accorded them the honour of a public reception at the Burg Palace; they were sumptuously entertained at banquets, by His Excellency Ritter von Toggenburg, the Minister of Commerce; an excursion to the magnificent railway works of the Semmering Pass was organized by the Government, and a repast for nearly 400 persons provided amidst the wild scenery of its mountains; and an invitation from the Mayor of Presburg, and the descent of

the noble Danube formed an agreeable finish to the labours of the preceding week. The courteous attention of Baron Czoernig, whether in the debates in the Sections, the General Meetings, or the private excursions was especially conspicuous on all occasions, and the ardent interest with which he devoted himself to the business of the Congress, inspired all its members with respect. May we hope that England will be equally successful in the approaching réunion here, in cultivating social relations with the distinguished men who, in all parts of the world, have brought the science of Statistics into so much honour, and who have proved by their arduous and devoted labours that they have forgotten self for the benefit of their country, and for the improvement and well-being of society in general.

APPENDIX A.

Report of Dr. Farr on the Progress of Government Statistics in Great Britain.

MONSIEUR LE PRÉSIDENT ET MESSIEURS,

L'Angleterre dès la première réunion du Congrès International de Statistique a toujours compris son importance et sa grande utilité. C'est ainsi que le Gouvernement de Sa Majesté la Reine a nommé deux Représentants à Vienne comme à Paris : malheureusement mon Collègue M. Fonblanque, tombé malade en route, ne peut assister à nos réunions. Vous regretterez avec moi, Messieurs, son absence et la cause de cette absence. Il avait préparé une note sur le progrès de la Statistique Commerciale en Angleterre depuis la seconde réunion du Congrès. Avec la permission de l'Assemblée je vous en donnerai tout à l'heure lecture en Anglais. En ce qui me concerne je ne vous entretiendrai que des changemens qui ont eu lieu dans la Statistique Officielle depuis la dernière réunion du Congrès, et dont quelques uns sont dus à vos délibérations.

L'état des recettes, des dépenses, et de la dette publique est publié annuellement depuis longtemps, et avec beaucoup de détails. J'ai l'honneur de mettre sous vos yeux un exemplaire de l'État Financier (Finance Accounts) pour l'année qui a fini le 31 Mars, 1857. Vous y verrez que les recettes se sont élevées à 75,350,825 l., ou à peu près à 753,508,250 florins. Voilà les revenus énormes que le peuple a voulu voter par ses représentants, et qu'il a pu voter sans gêne, à la chose publique sous l'empire vivifiant de la libre concurrence. Les dépenses n'ont été que de 68,097,287 l., ou à peu près de 680,972,870 florins. L'intérêt de la dette publique a été 28,681,177 l., ou à peu près à 286,811,770 florins.

J'ai l'honneur de placer sous vos yeux d'autres documents entièrement nouveaux : ce sont les Rapports Raisonnés de l'administration des Douanes, des Recettes perçues à l'intérieur ; et du produit de la Poste. On y trouve des explications et des résumés historiques d'un très grand intérêt.

Je dois reconnaître que la classification des faits n'a pas été inspirée par la Statistique et qu'il y manque notamment le *Tableau de la fortune de l'État*, dont parle M. Le Chevalier Hock dans sa note lumineuse, et dont nous serons sans doute unanimes à reconnaître la nécessité. Des comptes communaux sont publiés annuellement par l'administration des pauvres. D'après le dernier de ces comptes les recettes de 1856 pour l'Angleterre et le pays de Galles étaient de 8,496,458*l.*, ou à peu près 84,964,580 florins ; les dépenses de 8,212,012*l.*, ou à peu près 82,120,120 florins. Cette somme ne comprend pas les dépenses des routes de tout genre, ni quelques autres dépenses locales. Pour la rédaction de ces divers états je crois que nous profiterons largement des travaux de la troisième section.

Il faut constamment se rappeler qu'en ce qui concerne les finances de l'État il ne saurait y avoir de terme moyen entre le silence absolu et la publication franche et loyale de la vérité. Les capitalistes peuvent toujours faire payer cher le silence, et encore plus cher l'imperfection des comptes publics ; ils nous pardonneront, si, dans l'intérêt de la science, nous leur enlevons à jamais cet avantage ; qui, en paroles Anglaises—un peu changées—*if it enriches them, makes us poor indeed.*

En ce qui concerne l'Irlande, et l'Écosse des Rapports annuels font connaître les superficies consacrées aux diverses cultures, et contiennent des évaluations plus ou moins exactes sur les produits agricoles, et sur le nombre des animaux domestiques. Lord Stanley d'Alderley, Ministre du Commerce a compris toute l'utilité de l'extension de la statistique agricole à l'Angleterre proprement dite, et nous espérons que dans l'intérêt de l'agriculture même, la Législature adoptera le projet de loi qui lui a été soumis à cet effet par M. Caird, agronome Anglais des plus éclairés. Je mets sous vos yeux un exemplaire du Rapport sur les produits agricoles de l'Irlande en 1855.

Lord Brougham prenant en considération particulièrement les recommandations du Congrès de Paris, a soumis un projet de loi sur la Statistique judiciaire à la Chambre des pairs ; et M. Redgrave a inauguré la Réforme de cette Statistique dans l'Angleterre. Je dépose sur le bureau du Congrès un exemplaire de la première partie de son travail.

Nous possédons de très bonnes cartes à l'Échelle de 1-10560 pour l'Irlande, et de bonnes cartes pour la plus grande partie de l'Angleterre, et pour une partie de l'Écosse à l'échelle de 1-63360. Conformément aux recommandations du Congrès de Bruxelles le

Gouvernement de sa Majesté s'est déterminé à faire dresser des cartes générales à l'échelle de 1-2500, et des cartes des villes à l'échelle de 1-500. Déjà les cartes de plusieurs comtés et de plusieurs villes ont été dressées sur ces échelles. Ce travail a été malheureusement suspendu. Les avantages qu'offrirait une carte de l'Europe à une échelle uniforme sont évidents: ils ont été démontrés à la Chambre par Lord Palmerston: et nous croyons qu'ils seront appréciés par la Commission Royale qui est chargée de l'examen de la question. Une grande majorité des savants de l'Angleterre a exprimé des vues qui sont en complet accord avec celles du Congrès. Je dépose sur la table le dernier Rapport du Colonel James: il contient des spécimens remarquables des cartes que l'on a déjà exécutées, et des réductions à l'aide de la photographie.

Le Registrar Général vient de publier son 18^{me} Rapport, et il prie le Congrès d'en accepter deux exemplaires.

Je me suis occupé dernièrement d'une enquête sur laquelle je demanderai au Congrès la permission d'appeler son attention; c'est l'organisation du travail, ou plutôt la classification de la population par professions. La quatrième section du Congrès rendra des services des plus importants; elle a en vue particulièrement les produits de l'industrie: l'enquête dont je parle regarde spécialement la disposition et la condition variable des hommes, maîtres et ouvriers. Je dépose sur le bureau notre questionnaire. Je dirai seulement que nous avons commencé notre enquête par la profession des Mineurs, qui sont en grand nombre chez nous. En 1851 on en a compté *deux cent cinquante deux mille*, dont 182,180 travaillaient à l'extraction de la houille. Je ne dirai rien quant à présent de leur condition économique. Je me bornerai à faire connaître que ces hommes intéressants sous tant de rapports, à l'égard de leur santé souffrent beaucoup dans certaines circonstances et *en aucune manière* dans d'autres. La mortalité sur 1,000 dans quelques districts à l'âge de 20-40 est de 19; c'est le double de la mortalité de la population mâle générale aux mêmes âges. On croirait d'abord que cette mortalité exceptionnelle est due au travail souterrain: point du tout; car dans d'autres comtés où les mines sont sur la plus grande échelle (Durham et Northumberland), la mortalité n'est que de 8 par mille. Nous ferons connaître les causes de l'excès de la mortalité; et il vous sera évident que ces causes ne sont point du tout inhérentes à ce genre de travail, qu'elles peuvent au contraire disparaître de l'industrie des mines.

Nous venons de faire aussi des recherches récentes sur la mortalité de nos armées; et j'espère que le Congrès voudra bien en prendre connaissance. Il serait vivement à désirer que des recherches semblables fussent faites sur toutes les armées de l'Europe. Le soldat Anglais comme vous savez se trouve dans tous les climats; et la mortalité qu'il a éprouvée pendant les dernières années est de 33 par

1,000. La mortalité des troupes en Angleterre est de 18 sur 1,000; tandis que la mortalité de la population mâle aux âges correspondants (20-40) est de 9 sur 1,000. Ainsi la mortalité des troupes est telle que le pays perd *deux hommes* ou il ne devrait en perdre qu'un suivant la loi de la mortalité naturelle. *Constatons si les faits sont les mêmes dans les autres pays? C'est à la Statistique de répondre.* S'il en était ainsi on pourrait croire peut être que le soldat vivant paisiblement en garnison est soumis inévitablement à une mortalité double de celle des autres hommes. Des recherches faites chez nous démontrent cependant l'existence des causes bien évidentes de la mortalité excessive du soldat; et quelques unes de ces causes peuvent être éloignées, notamment l'encombrement des casernes. Comme membres du Congrès nous ne saurions être partisans de la paix à tout prix, et encore moins de la guerre à son prix actuel: nous ne devons même pas discuter ces questions; mais s'il nous appartient d'employer la statistique à l'amélioration de la population civile nous pouvons à plus forte raison l'appliquer à améliorer l'état sanitaire des armées. Dans ce cas nos soldats pourraient bien continuer à mourir sur le champ de bataille; mais ils succomberont en moins grand nombre qu'à présent aux maladies qui remplissent les hôpitaux militaires, et dont ils ont été atteints faute de recherches statistiques.

Avec votre permission, M. le Président, je vais maintenant donner lecture au Rapport de mon ami M. Fonblanque tel qu'il l'a écrit—c'est à dire en bon Anglais—au lieu de le traduire en mauvais Français. Vous verrez que l'Angleterre s'est vraiment associée à vos honorables travaux—ces travaux qui ont commencé à Bruxelles sous les auspices de l'un des premiers Statisticiens de l'Europe—qui ont pris un grand développement en France—et qui recevront je crois un nouvel élan des lumières et de la co-opération du Gouvernement de ce vaste Empire—qui nous a reçu dans sa ville capitale avec tant de bienveillance. Nous apprécions tous le "*Willkommen an den Ufern der Donau*" que M. le Ministre du Commerce a bien voulu nous adresser hier.

APPENDIX B.

Invitation to hold the Congress of 1859 in London.

Extrait du procès verbal de la cinquième Séance du Troisième Congrès International de Statistique. Samedi, 5 Septembre, 1857.

M. William Furr, délégué du Gouvernement Anglais, prend la parole en ces termes :

" Monsieur le Président, il nous reste à décider de quelle manière notre quatrième Session sera organisée. A ce sujet, j'ai une proposi-

tion à faire à l'assemblée. Elle est à peu près la même que celle qu'a voté le Congrès de Paris. Elle est ainsi conçue :

‘ Le Congrès est invité à décider, que la Commission Autrichienne d'organisation sera chargée comme fut la Commission Française en 1855, de déterminer dans quel pays et à quel époque se tiendra la quatrième session du Congrès International de statistique. ’”

Le Président, met aux voix la proposition de M. William Farr; elle est adoptée à l'unanimité.

M. William Farr, prenant de nouveau la parole, ajoute :

“ Ma proposition étant adoptée, j'ajouterai que M. Fonblanque et moi nous sommes chargés de déclarer, que si la Commission Autrichienne décide qu'il est dans l'intérêt de la science, que le Congrès tienne sa prochaine session à Londres, notre Gouvernement veut bien le recevoir.

Permettez moi d'y ajouter quelques mots de ma part. Je ne vous dirai pas, que si vous venez à Londres, la réception qui vous sera faite sera aussi brillante qu'elle a été dans les villes impériales de Paris et de Vienne, mais j'ose dire, qu'elle sera aussi cordiale (*très bien!*). L'Angleterre est hospitalière. Nos amis MM. Quételet et Visschers vous diront, que la première idée de notre Congrès, inauguré d'abord à Bruxelles, a pris naissance à l'exposition internationale qui se tenait à Londres en 1851. Croyez bien, que la Statistique a encore dans cette ville des amis, dont l'amour pour cette science et pour ceux qui la cultivent n'est pas refroidi. Londres est un peu loin de Vienne, et elle n'est pas si centrale quant à l'Europe que Paris, mais, Messieurs, il faut bien que le Congrès et la Statistique élargissent leurs bornes, et s'étendent au monde entier.

Sur nos îles occidentales, mises en avant dans l'océan, des représentants des divers Etats de l'Amerique et des colonies lointaines peuvent facilement se joindre à nous. Mais, dit-on, l'Angleterre est séparée du reste de l'Europe. Eh bien! Messieurs, dans des temps déjà reculés les Italiens, les Français, les Allemands, les peuples du Nord, n'ont pas craint de passer les mers et de fonder des colonies en Angleterre. Venez donc, Messieurs, en Angleterre voir les enfants de vos ancêtres (*Applaudissemens*). Et aux races diverses dont nous n'avons pas de représentans en Angleterre je dirai : Venez nous voir en frères (*Très bien!*). Vous êtes certains de trouver l'accueil le plus cordial (*Très bien! Très bien!*). ”

Le Président Baron de Ozeornig. “ Je ne manquerai pas de porter à la connaissance de la Commission organisatrice la proposition et le désir, exprimés par M. William Farr, et je suis certain, que l'accueil que l'une et l'autre ont déjà reçu dans cette enceinte aura de l'écho parmi les membres de la commission internationale. ”

On the Economical, Social, Educational, and Political Influences of Competitive Examinations, as Tests of Qualifications for Admission to the Junior Appointments in the Public Service. By EDWIN CHADWICK, C.B.

[Read before Section F, Economic Science and Statistics, of the British Association for the Advancement of Science, at Dublin, 31st August, 1857.]

CONTENTS:

	PAGE		PAGE
I.—Introduction.....	18	V.—Results of Open Competition as hitherto applied	35
II.—Present state of the Question. —Progress made.....	19	VI.—Evidence afforded by Founders' Endowments in Scotland	41
III.—Indian Civil Service.—Evidence of Sir Chas. Trevelyan	23	VII.—Important Collateral Results. —Conclusions	45
IV.—Effects of Open Competition. Experience in France	31		

I.—Introduction.

I CAME to Dublin on another subject, and I attended this meeting unexpectedly, and I am unprepared to submit, in a manner befitting such an assembly, the important question of Competitive Examinations as a systematised means of ensuring "an open and fair field, without favour," for the capabilities of the country; but I endeavour to comply with the wish of some of your eminent professors—members of the Section—that I should open it for your consideration, and it most certainly involves large Economic elements which bring it legitimately within the province of the section for the promotion of Economic Science; for it will be found that it will affect powerfully, in the way of prevention, the failure and waste of those investments of capital made by every parent in the expenditure for the education of his child.

It will affect indirectly the security of commercial, and manufacturing, and other capital, by the increased means it affords of obtaining assured and trustworthy service. It affects directly the economy of the public capital, and has a politico-economical element in the prevention of the waste of the national expenditure, as I have elsewhere stated, in the employment of three comparatively ineffective and ill-conditioned servants to do the work of two better qualified, and better paid, and better conditioned—I might have said of two to do the work of four or more. It is a wrong to great principles to pass over the teachings of great events: and without entering into party politics, I may assert that the principle affects preventively such waste of capital from mal-administration as was displayed during the last War; which waste—and I speak from the

impressions stated to me by competent officers engaged in the examination of the past War Expenditure—may be justly set down as one-third, that is to say, twenty-five or thirty millions—a sum which I confidently aver, parenthetically, would have sufficed for the execution of the chief sanitary improvements of all the cities and towns in the three kingdoms, and to have effected an annual saving of life greater than was lost during the first year of the last war, or than any war in which the Empire has been engaged, and gone to a saving of from ten to twelve millions of capital annually sacrificed from lost labour, premature disability, excessive sickness, and multiplied funerals, from an amount of disease, reduced, if not absolutely prevented, in the newly-regulated common lodging-houses, and in very imperfect model dwellings.

If there shall be a fair inquiry into the causes of the waste of capital, by the rebellion and war now going on, and as to the means of the prevention of future waste of capital; if India shall for the future be made to pay its own expenses, the economical test of good administration,—if, indeed, that empire is to be held at all,—those who have given the most serious consideration to the subject agree,—it must be by a reformed and superior administration, and that reformed administration must comprehend as its basis the extended application of assured qualifications for the service, tested on the principle which forms the subject of my address.

II.—*Present state of the Question.—Progress made.*

And first, as to the latest statistics of the question available for the section.

I beg to premise, in submitting the numbers of the examination of the Civil Service Commissioners during the last year that these numbers are not of Competitive, but chiefly of *Pass* examinations, of the character of which I shall speak presently. It appears from the report of the Commissioners that the total number of candidates for admission to the Civil Service on whose cases they had adjudicated from the 31st of May, 1835, to the 31st of December, 1856, is 8,000. Of this number 60 were found to be not within the limits of age prescribed for admission; 12 were not physically competent for the duties of their situation; 10 failed to give satisfactory evidence of their fitness in respect to character; 99 were admitted without examination upon reports from heads of departments—a mode of admission open to fundamental objections—and 137 either declined to undergo the requisite examination or withdrew without completing it. Of the remaining 2,686 who were actually examined as to their knowledge and ability, 1,587 obtained certificates of examination, 886 were rejected as not qualified, and 219 were unsuccessful upon competition.

On the first adoption of the provision requiring examinations, there were loud outcries against the very difficult and unreasonable subject-matters propounded by the Commissioners for examination, and if the ingenuity displayed by some of the rejected candidates, in misrepresenting the causes of their rejection had been properly applied to the subject-matters of examination they might have achieved for themselves a better position; for those subjects, have in reality been so simple, that I am much mistaken if the advanced charity-school children of Ireland, in the good schools, would not deal with them successfully. Now, out of the whole number of 860 rejections, no less than 425 have been rejected for spelling *alone*, or with other subjects except arithmetic; 147 have been rejected for arithmetic *alone*, or with other subjects except spelling, and 268 have been rejected for spelling and arithmetic, with or without other subjects, "so that," say the commissioners, "only 65 have since the commencement of our duties been rejected for deficiencies not involving spelling or arithmetic, or both." It is to be observed, then, and should be borne in mind, that the great bulk of these examinations are only pass examinations, and those for a low standard of mental qualification. The Commissioners state, however, encouragingly on this subject—"Although in such of our examinations as are *not* competitive there is not the same stimulus which exists in competitive examinations, animating the candidate to display whatsoever talent he may possess applicable to the subject in which he is examined, yet we can state that great numbers of the candidates who succeed in obtaining certificates have passed very creditable examinations, and have shown themselves thoroughly acquainted with the prescribed branches of knowledge," implying the fact that under this mode of mere pass examination, persons have gained admissions who were *not* thoroughly acquainted with the very common elementary branches of knowledge prescribed.

In their first Report the Commissioners had stated—"we do not think it within our province to discuss the expediency of adopting the principle of Open Competition as contradistinguished from examination, but we must remark that both in competitive examination for clerkships in our own and other offices, those who have succeeded in obtaining the appointments have appeared to us to possess considerably higher attainments than those who have come in upon simple nomination, and we may add that we cannot doubt that if it be adopted as a usual course to nominate several candidates to compete for each vacancy, the expectation of this ordeal will act most beneficially on the education and industry of those young persons who are looking forward to public employment." In their last Report the Commissioners state that during the past year, 24 competitive examinations of candidates for junior situations have.

taken place. "In these competitive examinations, however, the candidates competing for the respective appointments have, in most cases, not been sufficiently numerous to bring out all the satisfactory results which may be expected to arise from this system. It will be perceived from Table A, in the Appendix, that, disregarding the competitive examinations which took place in our office, and which we shall presently notice, in the 33 competitions there have been only 222 competitors proposed for 61 situations, and of these only 168 actually competed," that is to say, there were, on the average, only three nominated competitors for one place.

During the last year, it is to be observed that there were nominated and admitted to permanent clerkships, without competition, 577 nominated, and 310 admitted. Now it is to be observed that these arrangements are not in the sense of the recommendations of Sir Charles Trevelyan, of the Treasury, nor those of the late Mr. John Wood, the chairman of the Board of Inland Revenue, nor of Mr. Bromley, of the Admiralty, nor are they calculated to abate these evils of patronage nominations, which it was the testamentary declaration of the late Admiral Sir Alexander Cockburn were the great detriment and opprobrium of his profession, against which Admiral Sir Baldwin Walker, with so much moral bravery, contended, nor, I apprehend do they accord with the views of distinguished officers in the Army, nor are they in the sense of the recommendations of Colonel Larcom, and most certainly they are against my own. But they are in the sense of Sir George Lewis, the avowed enemy of the principle, to whom its practical application has fallen. It is to be assumed that the expectation of the public was in accordance with our recommendations. I believe that it may be also assumed that the understanding of the public has been and is, that the resolutions adopted in Parliament have been in the sense proposed by us, and understood by the public, that the examinations should be upon Open Competition and not upon Nomination, and that the principle of Competitive Examination should be generally applied to the whole field of service.

The first resolution of the House of Commons, carried by Lord Goderich, 6th of April, 1856, was in the form of an address to Her Majesty "to make trial in the civil service of the method of *Open* competition as a condition of entrance." We shall see in what way the promise of compliance with this resolution has been performed.

In respect to the appointments without competition to the 310 places, a few examples may be given of the number of appointments to clerkships and higher offices, made without competition during the last year. in the larger departments of the State:—

	Patronage Nominations.	Admissions.
War Department	41	25
Admiralty	38	21
Inland Revenue.....	154	66
Post-office Clerks—London, Dublin, and Edinburgh.....	51	31
Constabulary Offices, Ireland	211	113

Thus, there were only sixty-one situations, and those, I believe, at the instances of the more conscientious heads of Departments, given even in *nominated* competitions as against 310 given without any competition whatsoever. We must assume that these 310 mere Patronage admissions were given generally "without those considerably higher attainments" which the Commissioners attest are elicited by competition, and that the appointments have also been without "the stimulus which exists in competitive examinations, animating the candidate to display whatsoever talent he may possess applicable to the subject in which he is examined." In fact, the promise made as respects the application of the principle approved by Parliament and the public, it will be perceived, remains yet to be realized. The only cases in which proper competitions can be said to have been fairly opened, as contemplated by the public, are in the case of Cadetships for the Military Service, and in those only in the Engineers and the Artillery, and not for commissions in the Line. In the East India service there are competitive examinations for the appointments to writerships and medical appointments.

Erroneous as I believe the subject-matters of the present Indian Civil Service examinations to be in many respects, incomplete as may be the mode of conducting them,—they have, nevertheless, evolved elements of high educational, and social, and political import, which I shall subsequently specify, but first allow me to advert to some of the large common evils displayed in this same field of Indian Service, which open competition is calculated to meet. Before any deficiencies of the Civil Service had been made manifest during the last war, before the public mind had been aroused to the subject, Sir Charles Trevelyan, and other eminent civil servants, had represented the need of repairing those deficiencies, and had expressed matured views as to the means of doing so. For myself, I may claim to have expounded, a quarter of a century ago—(I did so indeed in an article, "The Administration of the French Charities," in the "London Review," for 1828, with which your Grace and the late lamented Dr. Arnold took a particular interest)—the principles now recognised, more particularly the principle of the open competitive examination, as the only efficient and trustworthy test of such qualifications as may be deemed requisite for admission to the public service, and I have invariably urged its practical adoption. My sub-

sequent experience, in which I have had passed through my hands the applications of between one and two thousand staff appointments, and have been employed in the business connected with the regulations of the expenditure of upwards of half a million per annum in twelve thousand local appointments, besides much business connected with local dismissals, has only confirmed more strongly my earliest impressions.

In respect to the Indian branch of our civil service, there are grounds for the expression of a confident opinion that the evils of the Rebellion now raging will, on a strict examination, be found to have been aggravated by the want of competent judgment and ability, consequent on mere patronage appointments, and defective administrative skill. A large proportion of the civil administrative functions have been exercised in India by young military officers, by boy officers, by administrators, of the qualifications of some of whom, indications are afforded by the low slang and most unseemly tone of their own published letters.

In respect to mere patronage appointments to direct commissions for the Indian army, an opinion may be formed of what they commonly were, from the results of the mere *Pass* examinations recently appointed. Thus, in the years 1851 to 1854, both inclusive, there were examined 437 candidates for direct Commissions in the Indian army. The candidates were generally the sons of gentlemen in high social position. Of this number, 234 failed to do common arithmetic, and 132 failed to spell their mother tongue. It was from the most accomplished civil servant of the East India service, my friend Mr. John Mill, that I obtained the recognition of the value of the competitive examinations, which he recommended in his evidence, and which he has so forcibly expressed in his paper laid before Parliament, with the other papers on the reconstruction of the civil service.

III.—*Indian Civil Service.—Evidence of Sir Charles Trevelyan.*

It was in India, the present field of disaster, and as a civil servant, that Sir Charles Trevelyan observed the great evils of mere patronage appointments, and became most anxious for the adoption of the principle of competitive examinations. You will find in his evidence on the India Bill in the year 1853, given with the measure and restraint of a public servant, the *under* statement and suggestion, rather than the development of matters of complaint, and forebodings of that state of insecurity of the service, which has recently been so widely and perilously manifested. He attests the fact that the men who failed in the college at Haileybury at home were, as a class, failures in the service in India. I cite his evidence as of important general application. He says:—"The

actual state of things at Haileybury in my time was this, and I believe it is so still.—The terms, that is, all who entered in one half year, consisted of from fifteen to twenty young men. There were generally three or four among them who gave themselves up entirely to study, and were very distinguished. There were a varying number, six, eight, ten, or twelve, as it might be, who obtained very fair advantage from the institution; but there was always a tail and fag-end of 'bad bargains,' reprobates, and professed idlers and men of pleasure. Now, these men were perfectly well known. They were as well known to the professors as they were to myself and to the other students, and that fag-end ought to have been cut off." The Earl of Harrowby asks—"But they equally went out to India?" "The great majority of them went out. The cases in which the students were finally dismissed were very rare indeed."

Now, it would surprise the meeting if they were informed of the extent of jurisdiction and power of life over the natives which fell to these "fag ends" and bad bargains. Sir Charles maintained that the competitive examination was the only trustworthy means for cutting off those same "fag ends." His expressions on that subject were solemn, and I beg to recall them: "Looking at historical precedents, as well as the reason of the case," continues the noble lord, examining, "do you think that the dominant race of the English in India would have still greater power and influence over the Natives than we now possess, if our officers went out so highly educated and accomplished as to be able to aid the natives, and lead the way in the prosecution of their physical well-being?" "They would have much greater power and influence, and probably the continuance of our dominion would be greatly extended. I may mention as an additional reason for having the ordinary securities for the proper appointment and training of military men, that they are selected in great numbers for civil and diplomatic appointments, and that in their individual character as Englishmen, each of them represents in a great degree the moral power of his country, and it is of the greatest importance that every Englishman in India, especially those in the service of the Government, should be as cultivated and well-conducted a man as possible, both for the continuance of our dominion and for the benefit of the natives. But, besides the new advantages to be attained by putting this important matter on a proper footing, much positive evil has to be obviated. Direct appointments to the Company's army in India, as they are called—that is, appointments which enable young men to be sent out direct to India without any check except that of passing a slight examination—are much sought after as a convenient mode of providing for young men who, owing either to misconduct or incompetency, are unfit for the English professions. In other words, although the great majority of

the cadets are well-conducted and honourable young men, 'India is a sink towards which the scum and refuse of the English professions habitually gravitates.' "

This, let it be borne in mind, was said in 1853. Sir Charles continues:—"This is an abuse which can only be effectually prevented by extending the competing examination and special training to the whole body of the cadets, which would also be attended with this additional advantage, that it would give us a larger field of selection for the officers of the scientific corps. Another prevailing evil is, that when families are assured of appointments for their younger members, either in the civil or military services, they are apt to consider it unnecessary to give them an expensive education; and it will be found that the great majority of the young men so circumstanced have been educated at cheap proprietary or private schools, and not at those which are generally admitted to be our first-class seminaries. This can only be remedied by substituting competition for nomination; but the tests of superior fitness for the young men intended for the military service should, of course, be adapted to the career for which they are destined." "Viewing," asks the Earl of Harrowby, "the career of young men educated for India as a career not of contemplative philosophy, but of active and honourable exertion, do you not think that those additions to the course of instruction designed to fit them for the performance of all those active practical duties would be a great incentive to them in their studies, as well as tending to make them generally more useful to the country in which they are to serve?" "I have no doubt of it whatever. If that plan were carried out at Haileybury, it would be impossible for them to waste their time in debasing and enervating dissipation, the standard both of conduct and attainment would be raised, and the character of the civil service much improved. Although I have conscientiously given a high character to the Civil Service, we must not be misled by its present high standard into the supposition that it cannot be still further improved; for the truth is, that the influence of the circumstances in which the civil servants are placed in India is such, that unless they are very inferior indeed they must become respectably efficient. The Indian service is such a forcing system that it will make a man out of a block of wood." "Do you not also think that in proportion as we raise the standard of native education in India, it behoves us likewise, not merely as a matter of duty, but as a matter of expediency, with the view of maintaining our real supremacy, which is founded upon intellectual and moral superiority, concurrently and proportionately to raise and improve the character of our civil service?" "Yes, I entirely concur in that. I consider that we shall not acquit ourselves of this remarkable trust in the eyes of the nations of the

world, nor perform our duty to God, who gave it, unless we take that course." He adds, recalling to mind the young men who in his time composed the fag-ends at Haileybury, such examinations would have prevented their admission to the service, "because the best and most uniform test of good conduct is Diligence. The great duty of a young man is to pursue his studies with diligence so as to get the full advantage of the education provided for him. The idle and ignorant are generally the worst conducted, and habits of dissipation are necessarily accompanied with idleness. So that any system which keeps out the idle and ignorant will, in the great majority of cases, also keep out those of inferior moral character."

One of the most eminent military officers and administrators whom our Indian service has produced, General Jacob, whose own pre-eminent forecast has been proved in a paper, written some time ago, in which he endeavoured to arouse attention to the low and dangerous condition of the Bengal Native Army, enunciated emphatically in that paper the admonition, that all our power in India rests on every Civil Servant commanding the respect and regard of every native around him, a condition far from being achieved. "We may," he observes, "lay it down, as an absolute certainty, that the millions of natives which a handful of Englishmen govern in this vast continent will not consent to be governed by a handful of their *equals*. Our power consists in our being essentially different from them, and their belief in our moral superiority only. The only thing which can endanger the existence of this power is the destruction or weakening of this belief." These are becoming common conditions of power, position, and service, almost everywhere. At home the economical considerations which belong to our particular science forbid the continuance of the wasteful as well as unsafe practice of appointing several persons to perform a service on the chance that one of them may be found competent as well as willing to perform it decently. Abroad, in the conduct of our widely extending relations, as well in our colonies, as in that great field where, according to such testimony as that last cited, the disastrous consequences, not of "malfeasance" so much perhaps the administrative defaults of "misfeasance" and "nonfeasance" are now absorbing the public attention, the proportion of officers to the population governed must be few, and their action isolated and independent,—and there especially—it is of increasing importance that every individual forming a link of the administrative chain of connection, whether civil or military, should henceforward be carefully, and even severely tested, for the sake of the public security.

It may be stated, as the effect of the concurrent testimony of a number of civil servants, of the largest experience, given before the Russian War, that the civil administrative departments were rendered

insecure by corrupt Parliamentary and Political Patronage, and by being made the "sinks towards which the scum and refuse" of the cliques of boroughs habitually gravitates.* Upon the remonstrances

* The exposition of the effect of Patronage Appointments was unavoidably incomplete, in omitting any statement of their effect on the constitution and action of the House of Commons itself, and the barriers which the practice of such appointments interpose to the most important administrative reforms required in our time. Statesmen of the highest character and of different parties have viewed with the most serious alarm the evil effects to be apprehended from an extension of political patronage. The practice of making appointments for patronage still operates as a barrier to the improved administration of the Indian Empire. Thus Sir Charles Trevelyan states in the course of the above-cited evidence "I consider that there would be very great danger in putting the Government of India under the Government of England," believing that, objectionable as the patronage appointments of the Company might be, those of the Government would be worse and more mischievous, in augmenting what he designated as the fatal detriment of the House of Commons, "the *evil principle*, which is known under many forms and names, party-patronage, favouritism, jobbing." He thus adverted to the action of the evil principle. "The executive Government depends for its political existence and success upon the House of Commons. Each individual member of the House of Commons depends for his political existence and success upon his Constituents. Even in ordinary times the Executive Government and individual members of Parliament find it difficult to refuse favours which it is in their power to grant, however strong the reasons may be against granting them; and when parties are evenly balanced, or great questions have to be carried, or a Government has to be maintained in power, or an opposition has to be lifted into place, things are done in this country, in the face of our active public opinion, and free press, and freedom of exposure in Parliament—which show how much greater the evil would be if India were brought within the direct action of our party politics. I can mention instances in support of this view, which everybody will admit; instances of a large and general character, which cannot be questioned. "5184. Applicable to India do you mean? No, but showing that in its present state the Parliamentary Government of England is not a safe depository for the direct and immediate administration of the Government of India. The conclusion at which I arrive is this, that the English Executive Government and Parliament are not, in the existing state of public opinion, to be trusted with a direct, immediate, and ordinary action on the administration of India. But it may be hoped that the state of public feeling in this country will improve; society appears to be putting forth a remediable power, and measures are, I hope, being taken, to cut up this corruption by the roots," meaning those measures for the introduction of the beneficent principle of open competitive examinations. "The evil principle," as above defined, stands as a barrier to the improvement of the army, to the abolition of the purchase system and promotions for merit, as may be shown at length from the evidence given before the commissioners appointed to inquire into the purchase of commissions in the army, where the main objection urged to the abolition, was that the prospect of promotion for merit was illusory, as against the force of the foul influences above described. "The *evil principle*" operates also as a barrier to the improvement of the navy, and was described by the late Admiral Sir George Cockburn as the opprobrium of his profession. In illustration of the patronage appointments to that branch of the service, I may mention that a late distinguished naval officer, who himself during the war never saw an enemy's vessel which he did not take, and who sat on a court-martial for the trial

made, the specification of qualifications was conceded, and then examinations as to those qualifications were admitted to be desirable, but the examinations proposed were merely pass examinations, and to these it is objected on considerable experience, that they are wholly illusory as securities.

Thus it is to be observed in the highly important testimony cited

of an officer for the loss of one of our frigates taken during the last American War, stated to me that on investigation, it appeared in that, as in almost every instance of loss during the same war,—the conflicts being between seamen of the same race, of the like bravery and power, with less of inequality in the force than was supposed,—had been clearly determined by the difference of skill in the commanders. The fact was that the American Commanders were chosen for their professional merit, from the best of the mercantile marine, and they handled their ships most ably, whilst our captains, very brave young men, but less skilled, were appointed not for professional skill but from political patronage; the contest being in reality between merit appointments and patronage appointments, and the nation lost by the latter, until the accident of one commander of merit, the captain of the *Shannon*, who trained himself and trained his crew, exhibited what might be expected from a better system. The more recent operation of the “evil principle” was displayed during the Dock-yard inquiry into the displacement of workmen appointed for merit by the Surveyor of the Navy, Sir Baldwin Walker, and by the interruption of the improvements in work, and of reductions of expenditure, by the substitution of workmen appointed for their votes for a particular member. The defence of the delinquent, the Parliamentary Under-Secretary, was that he had only complied with the feelings of the House of Commons for such patronage, and with the common practice. The terms of the defence made for him by the then leader of the House, Mr. Disraeli, were as follows:—Evidence 4072. “When the late (Lord Derby’s) Government was formed, the Duke of Northumberland, from a high sense of public duty, and from a great love of the profession of which he is a member, was anxious that the Board of Admiralty should be formed as free as possible from what are called political influences. No obstacle whatever was made to the wishes of his Grace, and the Board of Admiralty was formed by his Grace, of very distinguished naval officers, with the sole object of establishing the efficient administration of that great branch, and the consequence” (*i. e.*, of that sole object,) “was, I have no hesitation in saying, that there was not that complete understanding between the Board of Admiralty and the House of Commons which had hitherto prevailed, and which, I have no doubt prevails with the present Board of Admiralty, and which has prevailed before the Government of Lord Derby prevailed.” The witness varies the phrases expressive of the complicity of large numbers of members of the House.—“Upon Mr. Stafford devolved entirely the representation” at the Board, “of the feeling of the House of Commons.”—“The Board of Admiralty, formed of able and efficient men, looked only to what they called the service.”—“And there was not that harmony which ought to exist between a branch of the Administration” (*i. e.*, and the executive, or the House). Chairman—Lord Seymour:—“You stated, did you not, that there was a want of understanding between the Board of Admiralty and the House of Commons?”—“Yes; I mean to say, that the Board of Admiralty looked merely to the efficiency of the service, and they thought their only duty was, to consider the efficiency of the service; but they did not understand sufficiently the spirit of our Parliamentary Government, and that, in conducting affairs, they must consider the temper of the House of Commons; that tamper

in respect to the pupils especially prepared at Haileybury for the East India service, that an instance of the final dismissal of any of the constant "tail," and fag-end of "bad bargains," "reprobates and men of pleasure," "men perfectly well known;" "as well known to the professors as they were to the other students," was extremely rare indeed, and that the great majority of them went out to India and were charged with the exercise of powers there. I venture to assert, on avowals made to me by eminent examiners in medicine and in various educational institutions, that it may be taken as a general fact, that in the system of Pass Examinations, rejections are extremely rare, however frequent may be the failure of the strict or due proof of qualifications for being entrusted with the care of the lives and limbs of the population. The general avowal I have met with is to the effect, "one feels it to be a serious injury to a family to reject a candidate on whose education they have spent much money, and one cannot help being indulgent." Captain Basil Hall mentions the compunctious avowal of a pass examiner for naval commissions, that from regard to the interests of a family, he had passed a young man with a lenient examination. The examiner heard afterwards of the loss of the ship and all on board, possibly or probably from some error of navigation, under the command of the officer whom he had examined; and he (the examiner) could not help feeling compunctiously that the loss of all the lives was due to the exercise of the narrow sympathies and the lenient pass examination.* And with the mere pass examination they (the examiners)

is represented now, and has been represented before, by several members of the House of Commons, also members of the Board." "Your lordship, and the Committee, must know that these are things which are necessary to be done, and to be clearly understood." "Of course, I can easily understand that the various members supporting the Government, looking to the fair distribution of patronage, which has been referred to by one of the Honourable Members may have pressed, and I dare say, did press, Mr. Stafford, and that he found he was in a position in which he could not fairly satisfy their wishes." "This would lead to misunderstandings. There is no doubt, as every member of this Committee must know, that every party who supports the Government, whether they are in the House of Commons or out of it, naturally look to what is called a fair distribution of the patronage; and, I dare say, that may have led, under such circumstances, to misunderstanding." —4081. In the face of this declaration nothing was done by the House to rebut the charges here made against it.

* The inefficiency of the mere pass examination, either for the protection of the pupils or of the public, is displayed in such facts as the following, stated in evidence before the Commission of Inquiry into the purchase of commissions in the army. Thus, Colonel Lord West, C. B., states: "When I was commanding a regiment before Sebastopol, from sickness and casualties the number of duty officers became very small, and I then urgently requested that some of a number of young officers who were kicking their heels at the dépôt might be sent out at head-quarters forthwith. I received ten of those young officers in a batch who did not know their right hand from their left, and

avow that it cannot be expected that much lenience will not prevail in favour of the parties present, at the expense of the unknown and

had never been drilled; I was obliged to send them to the trenches to different points in command of parties of 30 or 40 men, much as I objected to leave such parties under the command of such very young subalterns. All that I could do with those officers was this: I sent the adjutant on parade, and told him to show them how to march their men off the ground. All that I could say to them was this: If the enemy comes on, hold your ground and drive them back if you can. In such a case much was left to the steadiness of the non-commissioned officers and the old soldiers."

2515. He states that some of these officers had received their commissions from the college at Sandhurst; he thinks the system there must be defective, and for its cure considers a system of competitive examination previous to admission into college might be established here as in France. Question—Sir Harry D. Jones: "The commanding officers of other regiments experienced the same difficulties and disappointments?" "I have heard the same complaints made by numerous commanding officers."

—Another officer, Colonel T. Harte Franks, C.B., gives evidence of similar experience in another field of service: "I think on going into field at first both our infantry and our cavalry appear to a very great disadvantage. I am speaking generally of our young officers; I have seen two armies in the field, as fine armies as ever I saw, and I saw one battle disorganize them; I do not think there was a good system. I have served in the Punjab campaign, and I served in the campaign in the Sulej, and in both instances I saw those armies completely disorganized. I have heard foreigners who were in the field remark on their condition, and the Prince of Prussia, who was serving with us, also made a remark upon it." Sir De Lacy Evans: "The regiments were disorganized, were they?"—"Yes, perfectly." Chairman: "Are you alluding to British regiments?"—"Yes; they fell into a state of looseness, in consequence of the officers not learning previously to the war their duty, which would have been perfected by the experience of the war." Sir Harry D. Jones: "Do you mean to say that the General Officers knew nothing about their business?"—"No; I did not say anything about them. Very often commanding officers did not do their duty." In answer to further questions, he states: "I will repeat what I heard at the battle of Moodkee; I was not present at the time; I came up after the battle of Moodkee, but I was at the battle of Sobraon. The Prince Waldemar of Prussia expressed himself astonished and surprised at the want of discipline in our army in the field. He said that all our infantry fired in the air. I was particularly struck with the looseness and disorganized state in which our army was."—"I think it originated in the officers not being properly instructed; they were the bravest men in the world, but they did not know their duty as they ought to have done in going into the field, and the consequence was that those regiments and brigades went to pieces, because our army is an army of battalions, which it ought not to be, and our officers are not instructed generally speaking as they ought to be." He expresses an opinion as to the superiority of the French system, but he declares that "You cannot have a good army until merit is fairly rewarded." Evading the evidence as to the applicability and the potency of the competitive examination, the Right Hon. E. Elliot, the member for Coventry, and one of the Commissioners, puts scoffing questions at the supposition of promotion for merit, and assumes the potency of "the evil principle" as a barrier. "Do you not think," he asks of the witness, "that money, parliamentary influence, aristocratical influence, and various other influences, would be brought to bear upon selection, if no system of purchase existed?—As long as these influences exist to which you allude, the officers without them could only trust for quick promotion to purchase;" but he adds that these ought not to be.

absent public. The abstract sense of duty is of no avail as against interests which are in the easy performance of service with the least trouble and occasion of present dissatisfaction. In proof of the professional sense of the essential insecurity of the pass examination, I might adduce the practice of Re-examination, any diplomas notwithstanding, when medical men have to make appointments, such as to dispensaries, in which they have interest and authority. So untrustworthy have the mere pass examinations been found to be, that amongst medical men themselves examiners of experience contemplate the introduction of competitive examinations in the appointment of officers as a means of improving the medical institutions of England, and protecting them from the increasing evils of mere patronage appointments.

IV.—*Effects of Open Competition.—Experience in France.*

Now, it is of the essence of the examination, for the principle of which we contend,—that of Full, Open, and Free Competition,—that in proportion to the openness and the publicity, and the number of the competitors, it forms the best practicable security—it may be said the only available practicable security against either undue laxity or the exercise of narrow sympathies on the part of the examiners, for it brings to the examination the security of publicity, and the attention of an intelligent and intensely interested public; of which public are the competitors, who, although they may be under the influence of illusions as respects themselves, are by no means bad judges as respects third parties, who are competitors. With them come their adult friends; but, over and above all, there come teachers, tutors, professors, interested, no doubt, in the judgment upon their pupils, most capable of controlling and exercising a decisive control upon the judgments in relation to third parties. In France there are, perhaps, the only extensive trials of the principle of competitive examinations, which has there been in operation for many years; and an examiner there assured me, as a common fact belonging to these examinations, that the security for integrity and strictness was complete. Indeed, the operation of the securities is felt to be onerous by the judges. One of them assured me that such was the effect of the interests brought to bear upon a full, open, and large competition, that if he, if any one, were disposed to be unjust, or were thoroughly corrupt, he dared not be unjust,—he was stringently obliged to strive to be manifestly just. The open notification which informs lone parents and lone students, and remote educational institutions, of the opportunity—which we contend is their right, as well as the right of the State to high and rare talent, wheresoever it may be found,—also constitutes an important security to the public for the integrity and completeness of the preparations, and for the elevation of the class

of competitors—by deterring those who are consciously weak on important points,—by frustrating sinister and narrow combinations; for who can tell from what unknown quarter and to what point powerful competition may come?

Open, and duly notified competition was the principle gained in the case of Indian Appointments, and in despite of much sinister writing and opposition, adopted by the public, and expressly sanctioned by the first resolution carried in Parliament, compliance to which was promised by the Government, but the competitions adopted are in a totally different and repugnant principle, namely of close private and departmental competitions, in patronage nominations. I had myself previously objected "on merely departmental arrangements for examinations to fill vacancies which occur occasionally, not only will the duties of examinations be thus performed in general—and at the best they are performed in manners which, as compared with the systemized procedures, are scarcely deserving of being called examinations—but the means of performing them in the most efficient manner practicable will be wanting. The notification of vacancies and the choice of candidates must usually be restricted from the wide range of attraction of the general service to the narrow circle of the personal connexions, or the knowledge of the chief officers of the departments. Moreover, departmental nomination by itself would only be one form of patronage. By preparation and watching for opportunities when the field appears clear of more eligible candidates, offices may frequently be almost made family heritages, as against the claims of the service itself and the public." Members of Parliament have said to me, "We very much like your new plan, Mr. Chadwick!" "Indeed, and why?" The ingenuous answer has been in several instances, "because we get more patronage. We get not only the credit of the one nominee appointed, but of all who are nominated, and the commissioners get the discredit of the rejections." My reply has been that "if you had done me the honour to read my paper you would have seen that this mode of examination is neither very new nor that of any other officer of the civil service whose opinion was taken, and who recommended the adoption of efficient tests of qualification as the basis of reformed administration." On the question of principle, I may cite the subsequent confirmatory testimony of the Commissioners appointed to examine into the best means of re-organizing the training of officers for the Scientific Corps,—testimony given after an examination of the chief schools on the continent. They state—"Among the prominent facts of Military education abroad, particularly in France, is the energy which a system of competition carried out consistently in the entrance no less than the other examinations,—imparts to the whole teaching

of those schools in which it is adopted. A system of mere nomination on the contrary, however conscientiously worked, has always a tendency to lower the standard of examination; for as Colonel Portlock has forcibly argued, what favour would it be to a powerful applicant to give a nomination on the one hand, and to cancel it on the other by too stiff an examination?"

By opponents of the principle of open competition,—more particularly I must say by some who are notorious partakers of political patronage for themselves or their families, and who assume the guise of superior information, and the exercise of a disinterested and moderating wisdom, in behalf of the nomination examinations, by which the patronage may be retained and conveniently extended,—representations are perseveringly made, that the principle of open competitive examinations is proposed as complete and sufficient in itself for every purpose; and these representations are made in the face of somewhat elaborate expositions to the contrary. By Sir Charles Trevelyan and myself, and, I believe, most other civil servants who have advocated the open competitive examinations, they have been confined to the Junior Appointments, and we have assumed prolonged and careful probation of the application of the qualifications after appointment—probations beyond those which exist or are contemplated under the system of patronage appointments, or nomination examinations. In the scheme of the competitions for the East India Service, it was provided that those who succeeded in the first competition, should have another probationary examination in the specialities of the service, within two years, but the authorities have chosen to make direct appointments, dispensing with this probation. It is in the usual course that failures will occur, and be attributed to the new system. The senior appointments to higher positions or of speciality will properly be of cases where the individual's professional career—as a lawyer, for example—will have been a prolonged competitive examination and probation.

I need scarcely observe here that the question as I have been enabled to submit it to the Section is wholly independent of the subject-matters of the examination, which might comprise either any of the absurd disquisitions of the schoolmen on the one hand, or subjects of the highest order of practicability on the other. In my view much of the subject-matters adopted, is objectionable on the score of inutility, and I consider that they ought to have a more practical direction.

The question assumes the previous ascertainment of moral qualifications. It assumes also the possession of physical qualifications. In the debate on the important question of the application of the principle of open competition to admissions to commissions in the Army, one of the old generals talked depreciatingly of the mental

qualifications, or "clerk work," and gave an instance where an officer failed, when surrounded by enemies, and was put to it, to exercise his bodily prowess—the prowess which belongs to the ranks. But that General should have been reminded that Buonaparte made military schools and open competitive examination the test of the mental qualifications for admission to his army, and that he so advanced the intelligence of his officers as to bring up men of inferior physique, small men like himself, to be more than a match for men of greater bodily power. As noted in the report of the Commissioners on the training of the scientific corps, he was wont to speak of the Polytechnic school, the field of the most systematised applications of the principle of competitive examinations, as "the hen that laid him golden eggs." As observed, however, by Mr. Sydney Herbert,—the bodily qualifications may be included in the competitive examinations, too and I have no doubt that the youth of Ireland, such as I see here at the University, would not be backward at the tasks he proposes, of showing how they could get over five Leicestershire fences, or trying a fall, or taking up the foils.

In the face of the common experience of our Universities and Collegiate Institutions, where for one who injures himself by overwork in competition for prizes, dozens notoriously injure themselves by habits which fair mental work would prevent, apprehensions are professed to be entertained of dire consequences from the overworking of the brain, in competitions, even in such elementary subject-matters as those on which it is proved by the statistics, which I have adduced,—that the great bulk of the failures take place in spelling and arithmetic!

In respect to the more popular and elementary instruction of the very young, I shall myself be prepared on some opportunity to adduce evidence of the expediency of reducing the usual time of sedentary application, and the practicability of substituting for it much bodily or industrial occupation, without detriment to mental progress. But in respect to the highest order of mental application—to pure mathematics, it will be found that the objection to which I refer is disposed of by the experience of the Polytechnic itself, of which the Commissioners state that, "Regarded simply as a great mathematical and scientific school, its results in producing eminent men of science have been extraordinary. It has been the great, and truly great, mathematical university of France." The students are, I apprehend, in physique, below the average of British students; and their competitions, instead of being at the end of a term, are incessant. A record is kept of the studies, of which the Commissioners say,—"The student, it would seem, must feel that he is gaining or losing in his banking account, so to call it, by every day's work. Every portion of his day's studies will tell directly for or

against him in the final competition in which so much depends." And now as to the apprehended bodily results:—"Cases of over-work," add the Commissioners, "no doubt occur, as in the early training for every profession; but, following the evidence we have received, we have no reason to think them so numerous as to balance the advantages of vigorous thoughtful study, directed early towards a profession which, however practical, is eminently benefited by it."

V.—Results of Open Competition as hitherto applied.

Having set forth the main elements constituting the principle in question, I now beg leave to submit to attention such Statistics as I have at hand bearing upon its application.

It is to be remembered that the Civil Service Commissioners' Report sets forth the fact, that after all there were only 61 public appointments which had been conceded to the semblance of a competition,—competition confined to nominated or patronage appointed competitors, averaging three for each place. No more than one competition having the semblance of an *open* competition, in compliance with the terms of the resolution of Parliament and the public understanding, have the Commission to report! The Commissioners were allowed the privilege of appointing the clerks for their own office. The appointments allowed to them were of four clerks, three of them junior clerkships, with salaries of £100 per annum, rising by £10 per annum to £200 per annum; and a fourth, a senior clerkship, with a salary of £200 per annum, rising by yearly instalments of £15 to £300 per annum. The Commissioners attest their own respect for the public opinion in behalf of open competitions by subjecting these four to it; that is to say, four out of four hundred for an open competition, if that can be said to be open in which there was, as stated by them, no public notification by advertisement, but only a notice to a few friends or persons connected with colleges whom they happened to meet. Yet, instead of only some three for each place, there were more than eleven, or forty-six for the four.

Whilst the officers of some departments were being disgusted almost to revolt, by the lower and lower social position and bankrupt character of the persons sent to be associated with them upon nominations as political patronage, a vast deal of alarm was affected and expressed, at the risk of an influx of "low people," if competitions were opened to qualifications—of advanced education and scholarship! As if to allay such alarm, the Commissioners are careful to set forth the indications of the social position of the candidates, brought forward by the daring innovation of an approach to an open competition for four clerkships.

Amongst these candidates there were :—

Seven sons of Clergymen.	One son of a Colonial Judge.
Two sons of Dissenting Ministers.	One son of a Professor of a University.
Eight sons of Gentlemen.	One son of a Commander of the Coast Guard.
Two sons of Magistrates of Police Courts.	One son of a Chief Clerk in a Government Office.
Two sons of Surgeons.	One son of a Lieutenant-Colonel.
Two sons of Lieutenants in the Royal Navy.	

Others have been in indefinite occupations.

Seven in Mercantile Houses.	Three in Government Offices.
Two in Banks.	Two in Public Companies.
One in a Public Board.	

Twenty-five had finished their education at Universities.

Sixteen had been educated at large Public Schools, or well-known Grammar Schools, and five at Private Schools exclusively.

The Commissioners state, as this result of this open competition, that its advantages have not been confined to the successful candidates. "In various instances the unsuccessful candidates have shown themselves positively competent for official employment, and have, in consequence of the opportunity thus given them of showing their competency, obtained other appointments."

After remarking on the high class of education displayed by the competitors for these subordinate places, the Commissioners observe—"We are anxious that our object in making this detailed statement should not be misunderstood. We are well aware that the various extra accomplishments of those gentlemen do not bear directly on their duties as clerks under this commission, although they show habits of industry and an amount of mental cultivation which cannot fail to enhance their general qualifications for official service. The facts which we thus bring forward with relation to the competition of clerkships for this office are intended to show that if opportunities were more easily and generally afforded than at present" [when, in truth, they cannot be said to be now afforded at all for the civil service,] "for persons to compete for situations of the like character, a highly-instructed class of industrious young men would present themselves as candidates. We must add, in justice to the four gentlemen who received appointments in this office, as a consequence of the competition we have described, that they have passed the period of probation to our entire satisfaction, and have proved themselves to possess aptitude for official duties, and most creditable habits of regularity and industry."

Looking at the public understanding of the question of Open Competitions, at the previous examples of the notified competitions for writerships and cadetships, which governed that understanding,

looking at the terms of the first resolutions of the House of Commons, and the promised fair compliance with its spirit, I must be pardoned for expressing a doubt whether Lord Palmerston can be aware of the manner in which the principle of competitive examinations has been applied, or of the small proportion which even the nominated and selected, and, in fact, packed competitions, bear to the whole mass of examinations, that the promise has, in fact, been entirely evaded. The solitary case cited, in which the Commissioners clearly indicate their own opinion, as to the broad principle sanctioned by the public, has not occurred at the instance of the Government, but of the commissioners. There has really been little more done for the civil service than the solitary instance of the competition for four places thus described by the commissioners! The nominated and private competitions, if they be really competitions, to vacancies which are unknown, are closed for Ireland, for Scotland, and the rest of the kingdom. There are 37,000 persons engaged in the Civil Service of the nation. What the annual vacancies are, no member has been at the pains to ascertain for the public. The vacancies to situations of an inferior character ranging from 50% to 80% per annum, and applicable to prize scholarships for the inferior schools, may be stated at between six and seven hundred per annum. Besides, there are, or were at the time of the Census, 10,000 officers of the Army, and 9,480 officers of the Navy. Consider the influence of the junior appointments to the vacancies in such numbers on the education of the country!

I now beg leave to revert to the Economical Elements, private as well as public, which it appears to me are involved in the extended application of the principle for which we contend, in the increased securities derivable from it, for those investments of capital made by the head of every family for the education of his children. The different results of education in different members of the same family, the sense of the grievous loss of time by inferior or misdirected tuition, which is a frequent subject of complaint, especially in the middle ranks of society; the large and gross failures which have hitherto been presented in the education of the lower classes, all create great mistrust of School education, as means for the attainment of desired ends.

To revert to the statistics which I have given of the large proportion of rejections on mere pass examinations for commissions in the Indian Army. From the declared rank of the parents of the candidates, as gentlemen and persons in good social position, I think there can be no reasonable doubt that the education of the whole of the candidates had been paid for—highly paid for—by the parents. Sir C. Trevelyan has been led to infer the cheapness of the education by the results; but, although some of it might have been given

in private schools, most of it would, I apprehend, have been of an expensive character. Yet the expense had been incurred in vain. The test of the mere pass examinations proved that in more than half the cases of rejections on a low standard of qualifications, there was almost a total wreck of the hopes of the family, and an irretrievable loss of the youth's time and the parent's money. His own evidence, which I have cited in respect to the failures;—"the tail and fag ends, the bad bargains,"—I think, display very common educational elements. Out of some fifteen or twenty young men, there were, he says, generally three or four who gave themselves to study, and were very distinguished; that is to say, distinguished from mediocrities, and absolute, and disgraceful failures. In these instances there was, perhaps, an expensive payment for education, yet with what uncertain results? Of the three or four who succeeded, who, from the small minority of merit, it will generally be found that their success is due to previous training, and though commonly held forth as the result of the system, they are the results of circumstances accidental to it, whilst the majority of low mediocrities, and a large proportion, if not the whole, of the bad bargains, and the "wastrels," in the public service as in the school, are due to the system, or to preventible circumstances by which the motives of the pupils are perverted, their fair conditions for instruction destroyed, and the labours of the education frustrated. For myself, from observation of the results of the different modes of education, upon the poorer classes, I have derived a strong faith and confidence in educational power, applied under the direction of available experience, to the elevation of all classes, and the results of some of the first competitive examinations which I have looked at with much interest, appear to me to be pregnant with important educational, moral, and economical promise.

From examiners, and also from professors engaged in the education of the very classes who are affected by the operation of the competitive system of examination for appointments in the East India Company's service, I have been informed that, even under the very limited extent to which the change of system has been carried, it has been attended by social improvements of a very high order, conducive to the morals, the security, the prosperity, and the repose of families.

The operation of the change is manifested in various forms in different families. I will mention one case, as it was mentioned to me by a professor, not, indeed, as a particular case, but as an A B C case, illustrative of the working of common elements. It is that of an eminent, and wealthy, and respected city merchant, who is a large holder of East India stock, always voting with the House authorities, and who has a family of sons, one of whom was to have

had a writership, another a cadetship, and a third a medical appointment. They were, however, all "fast" young men about town, varying only in the rates of fastness, neglecting tutors and home studies, out nearly all day and all night, coming home late in the morning, disturbing and distressing the father, and grieving their mother, who was wishing them out to their distant appointments—there, be it observed, to exercise command over multitudes of others before they had in any fitting degree obtain command over themselves. But why should those young men be expected to attend to tutors or to study, being assured by their father's respectability and influence with the directors that they would obtain the appointments without the qualifications to be gained by study? What need had they to allow themselves to be bored by tutors and forego the pleasures of youth? But before the "fast" course could be run out, and the patronage appointments gained, competitive examinations are instituted, and patronage is abolished. Speedily they see the fastest of their companions precipitated the fastest to the bottom of the list, and they see the appointments carried off by competitors from strange places, from Ireland, and from no one knows where, except they do not come from circles where the appointments had heretofore been deemed a vested right.

Moreover, it has already been observed that some of the successful competitors tested morally by their industry and steadiness, as well as intellectually by the competition, having had their general respectability duly verified, being now by their success assured of appointments and competent means, are as a natural and legitimate consequence favourably received and regarded in families and society, and are formidable competitors for prizes of another class. "He," says Sir James Stephens, "whose name shall stand at the head of the competition list, will, I admit, possess these humbler virtues (*i. e.*, intelligence and the steadiness of methodical men of business), because in youth good scholarship for the most part implies good character; but he will also be found to be a man of more than average self-possession, promptitude, address, resource, and hopefulness." And such, I should be prepared to expect, would be the characteristics of those who gain the highest places from Ireland and elsewhere. But observing this change, the fast young men of the merchant's family stay their career. Those who were careless at their studies, who wearied and disgusted their tutors, are now becoming attentive and interested, and are found to have good natural capacities for studies for which they before declared they had no genius, and their tutors, who were bores, are becoming revered men. Time must be allowed to these victims of the patronage system to hark back and make up for past fastness, but there is fair promise of some of them becoming eventually successful competitors. As

attention to study increases, disorder diminishes, and peace and confidence are gained by the change to the merchant's family. The system which insures to the State a good and safe officer tends to insure to the private family a good member and a sure support. To what did the merchant owe his own position but to open competition in an open profession? In basing the future of his house upon patronage, he based it upon a quicksand liable to be removed by every change of party. The transience of commercial houses (as will be found from the dereliction of the principles to which they owe their rise) is proverbial. The beneficent elements described will be found to operate to the repose and security of the highest families as well as to those of the middle classes. It may be commended, as in the interest of the highest aristocracy, that for purely domestic reasons, they should place their children under the security of the test, and that since all of them cannot, under existing circumstances, obtain public appointments, the choice of those of them who do should be determined by the test of the aptitudes by which the position of the class will be most securely maintained and probably advanced. In this competition they will hold their own. As it is, indeed, I believe it will in candour be conceded that plain "Mr. John Russell" would, as such, have won a position not dissimilar to that which he now holds, which, in truth, is under competition. I believe it will be acknowledged that if the head of the present House of Derby were at the bar as "Mr. Stanley," he would have been a brilliant *nisi prius* advocate, and have won, under the sharpest competition, a high position at the bar; and undeterred by his presence, I may assert there is one who, as Mr. Howard, would have yet had a great, acknowledged, and benign influence in the country.

The elements of disturbance, and of the frustration of academical labours by the influence of patronage, have been displayed in classes as well as separately in individual cases. What were the frequent and scandalous rebellions and disorders of our Military Schools but rebellions against studies by youths who were assured of their commissions by patronage, that is to say, without labour for qualifications?

The wife of the principal of one of these schools expressed lately to a friend her joy at the improvement which had taken place in her husband's domestic condition. Formerly he had come home dissatisfied, care-worn, and anxious, his rest was constantly disturbed at night, and his health was failing; but now the students behaved so well that his cheerfulness of temper was restored, his rest was undisturbed, and his health was improving. The behaviour of the students was so altered, their nature seemed to be so changed, that she knew not what had come over them! Why, pestilent Political Patronage had been reduced, and Competitive Examinations had come over them, and their interest in their studies had been restored!

From Dr. Kirkpatrick, principal of the excellent school, the Albert Agricultural Institution at Glasnevin, I have a copy of a letter to him from Mr. Patterson, his assistant, containing testimony of the like effects from the introduction of the competitive system for prizes for good service ;—the power of the incentive is recognized in every department. “There is a decided increase in the application given to their studies, and in the skill with which the farm operations are carried on,” and in the good order of the institution.

VI.—*Evidence afforded by Founders' Endowments in Scotland.*

Though it may be new to the public and to a large proportion of the persons interested in educational institutions, I am enabled to adduce the evidence of a century of experience of the salutary working of the element which we wish to make generally prevalent in academical studies and discipline. In the course of my official service, in which I have had to serve with able men and natives from each kingdom, it has so happened that I met with able Scotchmen in disproportionately large numbers from one part of Scotland, namely, from Aberdeen. Mr. Robert Chambers here tells me that in the course of the compilation of an historical work, he was surprised to find how many eminent men came from that part of the country. I am now about to point out to you a local institution, to the influence of which that extra crop of able men is distinctly traceable. It appears that in the Colleges of Aberdeen there are numerous Bursaries or Scholarships; one class, patronage bursaries; the other and the larger class, in greater proportion than elsewhere, bursaries obtainable by open competition of the whole country.

I am authorized by professors there in stating, as the result of prolonged experience, that, as a class, the pupils of the patronage bursaries are the plague of the professors,—whilst the pupils who come in by open competition are, as a class, distinguished by qualities which make the labours of the tutors with them peculiarly satisfactory. So important were the two antagonistic elements found to be that they were made chief topics of the investigations of the Commissioners appointed in 1826, for inquiring into the state of the Universities and Colleges of Scotland, and who made their report in 1832. In this report the Commissioners, amongst whom were the Earl of Aberdeen and several of the Scottish peers, the patronage scholarships are unanimously condemned as nuisances which ought to be abolished, Founders' wills notwithstanding. They say; “It cannot be thought an undue interference with the free disposal of property to regulate the application of funds left for the benefit of national institutions. If we are right in thinking that the great number of small bursaries in at least three of the Universities has had prejudicial effects upon the character of those Universities, there

cannot be any objection to the interference of the legislature; for, as the Universities are national establishments, it must be right to restrain any interference by private persons which may tend to defeat the objects for which they are instituted."

They add, "It is not the number of such bequests which is to benefit the Universities, but the manner in which they are applied; and a few endowments instituted upon sound views will produce much more beneficial effects than a great number of donations applicable to every purpose which the imperfect views, or perhaps the caprice of individuals may suggest. Whatever view may be taken of the subject we now advert to, there can be no doubt whatever as to the propriety of the Bursaries which at present belong to the Universities, being bestowed as the reward of merit and after public examination or free competition. Of late years very great improvements have been adopted in the Universities of Aberdeen and St. Andrews as to the disposal of the bursaries and the examinations of the persons holding them, and the professors have already had opportunities of witnessing the good effects resulting from these changes. But there are still many bursaries in several of the Universities which are not awarded after competition, or upon any proper principle. A variety of bursaries are bestowed by the Court of Exchequer, in consequence of grants authorized by King William, and at other periods; these are at present bestowed upon the application of individual professors or others. It is quite obvious that these bursaries should be awarded in a very different manner." So marked is the contrast of the operation of the antagonistic elements, so strong is the feeling of the injurious effects of the mere patronage appointments to scholarships, that in many instances, as I am informed, they have been suppressed, without any legal warranty, and the open competitive principle applied by the force of opinion. It has also been extended to schoolmasterships, and to some of the highest professorships.

I might adduce yet further evidence to prove that the majority of educational failures, which speaking here economically, I trust, as the losses of investments of capital, are due, not to perverse and uncertain natures, but to defective institutional arrangements. But the late experience of the working of the competitive examinations for appointments in the civil service of the East India Company which displays elements of progress, which I would most respectfully submit to the governors of our chief educational institutions, as of vast importance to them.

In respect to some of the educational institutions for the Poorer Classes, of which I have had at times official cognizance, it has always appeared to me to be a disadvantage of the schoolmaster, that his pupils disappear in the wide world, and that he has only few and accidental means of observing the particular effects of his labours upon them

in after life. To obviate this defect, I have in some instances got visits made to the employers of children, and questions put, as the experience of deficiencies in service, which improvements in education might for the future prevent. The facts ascertained, by these enquiries were fraught with important suggestions for the practical improvement of education. The heads of colleges and educators of the highest class, especially in the provinces, have appeared to me to be under similar disadvantages, leading a cloistered life away from the active world, and out of the way of particular observation of the results of their labours on the after lives of their pupils.

Now the extension of the principle of public competitive examinations appears to me to be of vast importance for the efficient and satisfactory direction of the educational labours in colleges and universities to the world's actual needs of practical service of duty as well as of accomplishment. For the East India Company's service a programme of the educational requirements for officers of the first-class in the civil service, including befitting mental accomplishments as well as the qualifications special to the offices having been laid out on a direct view of the public demands, the heads of Trinity College, Dublin, as it appears to me have set a valuable example by the appointment of a special committee for adopting courses of tuition to meet them. One of the prize competitive scholars of Aberdeen, a young man of remarkable power, was a competitor for one of the high offices put up to competition in the Company's service; but he found that the course of instruction given at his own college, at Aberdeen, did not enable him to complete his preparation, and he was obliged to get it completed elsewhere; I believe at London University College, and at Cambridge also, and he succeeded. Such experience of the insufficiency of existing academical courses to suit the changed conditions of the world, and of the advantages of the new administrative arrangements in keeping the heads of colleges early and authentically informed of them, so that loss of time and money and the hopes of families may be prevented, will not I trust be lost upon the directors of the education of Scotland, or those of Great Britain generally. Competition between colleges and schools will, I submit, be as salutary as well regulated competitions between individuals. Besides giving our superior educational institutions the direct information which is so useful for their guidance, the new principle will enable them and also the public at large to determine their position relatively to each other. The interest which such competitions as have already taken place, excites, promises moreover to our chief educational institutions, the stimulus of academical Derby days.

The important experience of Aberdeen in respect to the compe-

titive scholarships, shows that the beneficial operation of the principle will not be confined to the superior institutions. In Aberdeenshire it is perceived that the pupils of particular masters of private preparatory schools, obtain more of the college prizes than the pupils of other schoolmasters. The schoolmaster of the most successful pupils being marked out by this test is sought after by parents, and commonly by parents who have no intention of sending their children to college. Wealthy parents who have no need of the eleemosynary scholarships, nevertheless, put their sons to the competition for them, to determine their position, and I have understood, that when the scholarship has been won, such parents usually resign them for the benefit of the class for whom the institution was intended. In this way the competitive principle in its action affects most beneficially the whole of the surrounding education of the primary schools.* If

* To these favourable influences must be added the circumstance that of endowments which ensure parochial school-teachers of a condition above the average. The beneficial effects of these improved educational institutions on the economical and social condition of the population are strongly marked, as compared with others having institutions of a lower character. Amongst these effects none was more marked as attended with social advantages than the opening given by the competitive scholarships and the collegiate arrangements, for the admission and advancement of merit of every class. In the course of the examinations by the commissioners, Professor Forbes, of King's College, Aberdeen, was asked—"Are a great proportion of your students in a situation of pecuniary difficulty?"—"There are a great number of them that are, in fact, obliged to go home and work at farm labour, in order to enable them to come up the next session to college; and I have one gentleman in my eye, who, I am, sure, will be an honour to any profession that he enters upon, who was obliged to do so—that is, hold the plough, and to cut the harvest; and I scruple not to say that he is one of the best scholars that ever was within the walls of an university?"—"Do you consider it an advantage, that the system of university education should be so framed as to be thrown open to the lowest classes of society?"—"I do consider it a very first-rate advantage to this country for many reasons. Every one knows that in every situation of life at present it is extremely difficult to say in what way fathers are to employ their sons; and I believe it will be found upon calculation that he can as easily carry him through an university course as he can put him into a very small farm. I say it is of the greatest consequence to the community that it shall be so; for what is it that has raised Scotland to its high state of intellectual improvement? It is indeed the parochial schools; but it is the parochial schools, supplied with a set of men who have had a complete university education, and who are quite ready to go even into that depressed situation. And such is the abundance of young men in this country who have had a university education, that there is not a farmer who, if he is able to afford £15 or £20 a year, cannot have such a person to teach his family. At this moment, indeed, a great portion of the education of England is carried on by Scotch young men. I myself have recommended about 35 within these two years to go to London, who are all now employed, and many of them doing extremely well; and I am sure if any obstacle is thrown in the way of our young men, however poor, receiving such an education, the consequence will be that you will not have that choice of teachers in Scotland that you have at present; and what they are to do in England for qualified teachers, I believe it would be difficult to say, if they are not supplied from us."

to those schools were also given the advantage which is due to them; of competition for the lower class of appointments to the public service now given as corrupting and degrading political patronage, there would be conferred on education, and on the middle class of the population benefits the extent of which it is difficult to estimate.

On these particular advantages, and on the claims of the primary schools to the stimulus of open competitive examinations, for the public service, strong and unanimous feeling was expressed at the Educational Conference lately held in London, under the auspices of His Royal Highness Prince Albert, and it is to be hoped that the members of that conference will join in some measures for the prosecution of those claims.

VII.—*Important Collateral Results.—Conclusions.*

The full prevalence of the principle of open competition, will not be confined to the public service, but will affect beneficially the open professions and the private service market.

It has done so in France, where the prize scholars frequently get higher emoluments in commercial or private service than would be open to them in the service of the State. I have elsewhere stated that whilst it is to be repudiated as one of the most disastrous fallacies that passion or sinister interest has ever promulgated, that public administration, unlike private administration of smaller affairs, needs neither special aptitude nor study, and that, being incapable of principles as a practical art, unlike all practical arts, it may at once be undertaken by all people with almost equal success,—it should by all means be kept free from the sham science and mere craft which has been the bane of the administration of justice, and which it has been one great object of law reform to obliterate. I can speak from experience of the general worthlessness of Testimonials, and of the anxiety attendant on the use of the un-tested capacity for the performance of old and settled duties, much more of duties which are new and unsettled. The heads of commercial establishments are under the like perplexity, in being compelled to use service which they have no time or satisfactory means to examine.

Though we do not profess the competitive examination to be infallible, it approximates to a "Hall mark" of great practical value. as commercial and manufacturing houses have testified in relation to the competitive examinations promoted by the Society of Arts. The proper official specialities are those which are common to private as well as public business, and are, for the most part, derivable from the best private practice, and, when further cultivated, will return contributions of improvements to that practice. By means of the competitive examinations, such contributions may be made highly important. There are now, for example, no examinations for the

professions undertaking large structural arrangements, and high titles to practice are often assumed by dangerous and wasteful empirics. If, in those works referred to, a successful course of practical instruction be laid down as a qualification for admission to the public service, and the evidence of successful practice be pre-appointed for the higher grades, and open competitive examinations in them be conducted in such a manner as to insure public confidence (as has been done in relation to the competitive examinations for certificates of competency from the School of Mines and for school teachers), it may be confidently expected that persons will be trained to the prescribed standards, and that the examinations will be resorted to for degrees or certificates as means of obtaining private engagements. A standard of nautical education, tested by competitive examination, for service in the Royal Navy, might be made supplemental to the examinations now instituted for the mercantile marine. For merchants and men in private business, who have no time to make textual examinations, for service in the Colonies, not to say in the United States, a certificate from a well known and responsible public board that a candidate had stood high in a competitive examination must often enable the possessor to emerge from the narrow circle of personal connexions, and serve as a valuable passport to private practice. The like certificates would be available for Accountantships and various branches of private business, for which there are now no common educational preparations; none however, that may not be easily surpassed by public arrangements.

The principles of public and private administration of property and business are often essentially the same. An improved administration of a public income has been found, for example, a good training for the administration of a private income. On a full consideration of the public requirements, I apprehend that there will be found occasion for examinations for various stages of progress in the specialities as well as in general qualifications. This measure will commend itself as one of humanity as well as economy, and it would provide that capacities of real worth may be early ascertained and receive confirmation and confident direction at stages of progress,—that grievous errors of unapplied or misapplied, or insufficient capacities may be early and decisively detected,—and that pupils may not be kept going on, some in mere idleness, others in courses for which they are the least fitted, consuming their time and the means of families, until the period when they might have gained a training in suitable occupations has closed, and rejection involves a total wreck, and grievous loss of money and hope. We have already had examples of the service of public examinations to private professions. In the Government School of Mines, first originated under the direction of my friend the late Sir Henry Delabèche, the training

of the pupils is tested by competitive examinations for certificates of competency. Under this stimulus their qualifications have been so well established, that hitherto all the pupils have obtained employment in the private service market. Although the commencing salaries offered were £150 per annum, more than double those of junior clerks, I am informed that none of the certificated pupils have hitherto been got to accept them. Competitive examinations for certificates of competency are now proceeding with good promise of success in the Government Schools of Practical Art, under the superintendence of Mr. Henry Cole and Dr. Lyon Playfair. I learn that the results of the training of female school teachers, tested by examinations, have been similar to those of the competitive examinations of the males for certificates of competency, but in another direction, which I mention for the edification of the ladies present. The females have been so far advanced in mental power and influence as to have been lost to the service by matrimonial engagements, obtained with exceeding rapidity. To avoid these losses, plainer candidates were selected for training, but they too have obtained preference as wives to a perplexing extent, and to the discontent of the heads of the schools, who are dissatisfied at being made ministers for training prize wives at the public expense for private individuals.

The short experience of such competitive examinations as have yet taken place, has already displayed indications of one important effect which will be produced, by the proper and extended application of the principle, namely, the discovery of rare and special aptitudes in obscure places; and amongst them of scientific aptitudes, in the development of which this association is particularly interested. In the course of the examinations of the classes at mechanics institutes, promoted by the Society of Arts, at the instance of Dr. Booth, who, I believe was the first to point out the importance of competitive examinations for testing Middle Class Education, there was found one young man, a grocer's shopman in a provincial town, who displayed remarkable aptitude for mathematics; such aptitudes as was needed for the scientific observations conducted under the direction of the Royal Society at the Observatory at Kew, where, as I am informed by Lord Wrottesley and by Mr. Gassiot, that he is now doing good service with those talents, which but for the duly notified open competition would in all probability have been lost to himself and society in the obscure situation in which they were found. From Dr. Kirkpatrick, I have an interesting letter of grateful acknowledgment for assistance rendered by him to a youth, who is attested by all his masters to be of remarkable power, the son of a poor carpenter in a remote part of Ireland, who after a desperately severe examination, has obtained a civil service appointment

in India. Amongst a majority of successful competitors from the Universities of England and Ireland, there was one who, as I am informed, is the son of a working blacksmith at Aberdeen. Such examples, if they are not sufficiently numerous to excite hopes amongst the many, have a high social and political importance in preventing misrepresentations, and subduing a banking belief of unjust and partial exclusions.

Politically speaking, the measure which I advocate, is only a procedure for the practical application of a constitutional principle, and for the maintenance of legal rights of the subject as well as the State established by early common law decisions, and by early statutory authority,* but overgrown by political corruptions, for the want of such a procedure for the maintenance of those rights as shall be self-acting. The competitive examination may be treated as an invention, which is an effectual guarantee for the maintenance of the rights of the subject to equality before the law, and the rights of the State to the best service. The concurrent views of well-informed and impartial persons in the paramount political impor-

* "By the 12th year of Richard II, cap. 2, none shall obtain offices by suit, or for reward, but upon desert." "Item: It is accorded that the Chancellor, Treasurer, Keeper of the Privy Seal, Steward of the King's House, the King's Chamberlain, Clerk of the Rolls, the Justices of the one Bench and of the other, Barons of the Exchequer, and all other that shall be called to ordain, name or make Justices of Peace, Sheriffs, Escheators, Customers, Comptrollers, or any other Officer or Minister of the King, shall be firmly sworn, that they shall not ordain, name, or make Justices of Peace, Sheriff, Escheator, Customer, Comptroller, nor other Officer nor Minister of the King for any gift or brokerage, favour or affection; nor that none which pursueth by him or by other, privily or openly, to be in any manner Office, shall be put in the same Office, or in any other; but that they make all such Officers and Ministers of the best and most lawful men, and sufficient to their estimation and knowledge."—St. 5, E. 6, cap. 16. Under this statute, in the year 1725, the Lord Chancellor was impeached, convicted, and fined £30,000, for having received presents; on which he established a plea of its being a custom of his predecessors—for appointments to Masterships in Chancery. "By the ancient common law, officers ought to be honest men, legal, and sage; *et qui melius scient et possint officio illi intendere*, and this (says Lord Coke) was the policy of prudent antiquity, that officers did give grace to the place, and not the place grace to the officer."—2nd Institute. "Nor can anything be a greater discouragement to industry and virtue, than to see these places of trust and honour, which ought to be the rewards of those who by their industry have qualified themselves for them, conferred on such who can have no other recommendations but that of being the highest bidders."—2nd Institute, 1 to 8. "It is said to be *malum in se*, and indictable at common law."—The text book *Bacon's Abridgment, Title Offices*. "'Insufficiency'—which may, it is presumed, be relatively to another, for the public have a right to the best—'is an original incapacity which creates the forfeiture of an office. So if a superior puts in a deputy into an office, which may be exercised by deputy, who is ignorant and unskilful, this is a forfeiture of the office. If the King grants an office in any of the Courts of Westminster, the judges may remove such an officer for insufficiency.'"—

tance of this measure, beyond most of the stock political questions of the day, may be best stated in the words of one of the chief philosophical writers of the age; an eminent member of the Indian Civil Service, Mr. John Stuart Mill, the author of the *Principles of Political Economy*:—

“The proposal to select candidates for the Civil Service of Government by a competitive examination appears to me to be one of those great public improvements, the adoption of which would form an era in history. The effects which it is calculated to produce in raising the character both of the public administration and of the people can scarcely be over-estimated. It has equal claims to support from the disinterested and impartial among conservatives and among reformers. For its adoption would be the best vindication which could be made of existing political institutions, by showing that the classes who under the present constitution have the greatest influence in the government, do not desire any greater share of the profits derivable from it than their merits entitle them to, but are willing to take the chances of competition with ability in all ranks: while the plan offers to liberals, so far as the plan extends, the realization of the principal object which any honest reformer desires to effect by political changes, namely, that the administration of public affairs should be in the most competent hands; which, as regards the permanent part of the administrative body, would be ensured by the proposed plan, so far as it is possible for any human contrivance to secure it. When we add to this consideration the extraordinary stimulus which would be given to mental cultivation in its most important branches, not solely by the hope of prizes to be obtained by means of it, but by the effect of the national recognition of it as the exclusive title to participation in the conduct of so large and conspicuous a portion of the national affairs: and when we further think of the great and salutary moral revolution, descending to the minds of almost the lowest classes, which would follow the knowledge that Government (to people in general the most trusted exponent of the ways of the world) would henceforth bestow its gifts according to merit, and not to favour; it is difficult to express in any language which would not appear exaggerated, the benefits which, as it appears to me, would ultimately be the consequences of the successful execution of the scheme.”

The support which the measure has received from eminent members of both the great parties, has placed it in the position of a neutral question; I am however apprehensive that that is by no means a position of advantage, but one in which it is mutually neglected—in this case, there is too much reason to believe, in many instances, on mutual understandings. The statistics which I have adduced, showing how little has yet been done to comply with the public promise, indicate the extent of out-door exertions yet required to

ensure its realisation. Demonstrations are needed, from such associations as the present, and from the educational institutions of the country. To politicians the cause commends itself for other reasons than those above recited, and which may be more fittingly expounded elsewhere.

To parents then who are deeply interested in the success of that education which is to govern the destinies of their children, the cause of public competitive examinations commends itself as a means of ensuring the domestic peace and prosperity of their families, of influencing the minds of young persons by the constant presentation of peculiarly impressive examples of success achieved by diligence, and of failure attendant upon idleness and dissipation; and it also commends itself to parents as a means of testing for their selection the merits of schools. To tutors and educators of every class and degree, the cause of open public competitive examinations for the public service, and collaterally for the private service, commends itself for their exertions, as a security against the perversion of the minds of their pupils, as a means of sustaining the pupils' interest and cheerful attention and sympathies, and as an additional guarantee for the just appreciation of educational labours. Their exertions should be organised, and directed to the constituencies to promote self-denying resolutions against the continuance of Political Patronage, at the expense of the rights of individuals, of educators, and of the highest interests of the State.

NOTE BY THE EDITOR.

The preceding Paper, by Mr. Chadwick, may be justly regarded as one of the communications which excited the greatest interest at the Dublin Meeting (1857) of the British Association. The Section-room was crowded by a large and distinguished audience, and the discussion originated by the Paper was, with difficulty, confined within the limits of a day's proceedings. The President of the Section was His Grace the Archbishop of Dublin (Dr. Whately). There were also present the Lord Lieutenant (Earl of Carlisle), the Chief Baron of the Irish Exchequer, the Bishop of Cork, Baron Greene, Lord Montague, Judge Crampton, Dr. Daubeny, Mr. Napier, M.P., Mr. Whiteside, M.P., Mr. Lawson, Q.C., Dr. Graves, F.T.C.D., Mr. Recorder Hill, Mr. Edward Baines, Mr. Crawford, Mr. Gassiot, Mr. Robert Chambers, Professor Jellett, Dr. Hancock, Professor Cairnes, Dr. Dix Hutton, Dr. Strang, Mr. Haughton, Mr. Perry, Mr. Newmarch, and others.

In the course of the discussion Dr. Whately said that it might be acceptable to the Meeting if he were to mention two anecdotes in confirmation of some things that had been adverted to in the very important Paper which had been read. One of them related to the University of Oxford, and was a confirmation of Mr. Chadwick's remark on the great apathy which was produced by men finding that the way was plain for them without any exertion. In the Oxford Colleges, previous to the recent

reforms, there was a secure position on the Foundation for those who could prove themselves of the kin of the founder, and it was a common saying, as a recognised description of a slow or inferior person, that he was of "Founder's Kin," or almost a founder: *i.e.* a numskull. Another anecdote related to the Professorship of Political Economy in that University (Dublin), which, as they were aware, was established twenty-six years ago. The senior Fellow expressed some hesitation as to how they should proceed with the election, and he was assured by the late Provost Lloyd that some person suggested to them that the best course would be to elect a man, without entering at all into the details of the Science—that, in fact, they should elect a man of safe, *i.e.*, conservative principles. He advised them to throw that consideration overboard, and that the candidate should be selected according to Competitive Examination, which was done, and had been pursued ever since. There was always a very competent Professor appointed, and this was now one of the first schools of Political Economy in Europe.

The Meeting was further addressed by Mr. Napier, Q. C.; by Mr. Whiteside, Q. C.; by Mr. M. D. Hill, the Recorder of Birmingham; by Mr. Baines; by Mr. Evelyn; by Dr. Graves; by Mr. Kavanagh, the Inspector of Schools; and by Mr. Crawford, late Governor of Singapore.

It is not the practice of Sections of the British Association to adopt formal Resolutions as the offspring of discussions arising out of Papers read. On this occasion, however, the Committee* of the Section (F), felt that it would be a legitimate and useful course to place on record in the Minutes of the Section an entry descriptive of the proceedings and results of the day. On the following morning, therefore, (1st Sept., 1857,) the Committee adopted the following Minute on the Motion of Mr. Newmarch, viz. :—

"The Committee of Section F feel themselves specially called upon to advert to the proceedings of yesterday, (Monday, August 31st, 1857,) at the Meeting of the Section in connection with the Paper by Mr. Chadwick on Competitive Examinations. The Section was presided over by His Grace the Archbishop of Dublin,—it was attended by a considerable number of persons of eminence, including men of all persuasions and parties—and the Section-room was filled with an attentive audience. His Excellency the Lord Lieutenant was also present during a large part of the proceedings. The Paper by Mr. Chadwick entered largely and fully into the whole question of Competitive Examinations, and in the course of the protracted and animated discussion which ensued, nearly every part of the subject, practical and theoretical, was examined in great detail. As the general result of the whole proceedings, it appears to the Committee of the Section that it is incumbent upon them to record the following Minute, viz. :—

"That it was fully manifested by the proceedings of yesterday as the clear and strong opinion of the Meeting of Section F, then held, that in the settlement of the plan of Competitive Examinations for Employment in the Public Service of the Home Government, of India, and the Colonies, the basis of the whole should be the principle of Open Competition—meaning, by Open Competition, the admission of all Candidates who, subject to a few simple preliminaries, may present themselves for Examination, excluding, therefore, any settlement of the List of Candidates by mere Patronage Nomination."

* The names of the Committee of Section F will be found in the last volume of the *Journal*, (xi., p. 429).

On the Annual Fluctuations in the Number of Deaths from Various Diseases, compared with like Fluctuations in Crime, and in other Events within and beyond the Control of the Human Will. By WILLIAM A. GUY, M.B., *Cantab.*, *Fellow of the Royal College of Physicians; Professor of Forensic Medicine, King's College; Physician to King's College Hospital; and one of the Honorary Secretaries of the Statistical Society.*

[Read before the Statistical Society, December 15, 1857.]

IN the autumn of 1855 I presented to the Statistical Section of the British Association, then meeting at Glasgow, a Paper "On the Fluctuations in the number of Births, Deaths, and Marriages, and in the number of Deaths from Special Causes, in the Metropolis, during the 15 years, from 1840 to 1854 inclusive." It was one of the objects of that Paper to invite attention to the fluctuations in question, and especially to the fluctuations in the mortality from special causes; but I took occasion to state that I should find another opportunity of turning to other account the figures contained in the Paper. This I now propose to do.

It may be necessary to premise that the figures I am about to make use of in the first part of this Essay represent the number of deaths from the several specified causes in a million of persons living during a year of 365 days; and that the average annual fluctuation (for I propose throughout this communication to restrict myself to average fluctuations,) must be understood to be "the quotient obtained by dividing the sum of all the successive differences between year and year, whether in excess or defect, by the number of those differences, and then reducing that quotient to a per-centage proportion of the average of all the years."

I shall preface what I have to say on the proper subject of this Paper by a few remarks on the larger figures of my former communication, using those figures in such a manner as to establish a few general principles bearing directly on the value of the results afterwards to be worked out.

One question which will naturally suggest itself in reference to these annual fluctuations has reference to their value as materials for solving such problems as may offer themselves for consideration. Are these numerical fluctuations to be regarded as chance combinations of figures, or as consistent results of causes acting in combination, and varying with the number and nature of those causes? An answer to this question would seem to be provided in Tables I, II, and III, of my former Essay, containing a return of the births and deaths in London, during 15 years, per million of inhabitants in a

year of 365 days. The male and female births, taken together, present a mean fluctuation; the births of 1·95, or nearly 2 per cent., and the deaths of 9·51, or 9½ per cent. Now if these figures were the result of what is vulgarly called chance, it is certain that their fortuitous origin would betray itself in the figures which represent the fluctuation in the births and deaths of males and females respectively. But this is so far from being the case, that when this separation between the two sexes is made, the figures which represent the mean fluctuation for males and females are found to differ very slightly from each other. The fluctuation in the births is 2·05 for male children, and 2·10 for female children; and the fluctuation in the deaths 9·26 for males and 9·88 for females.

The inferences to which these comparisons lead us, namely, 1. That the fluctuations from year to year are not fortuitous, and 2. That the differences between the two contrasted series of facts are as inconsiderable as the introduction of the single element of sex in addition to the aggregate of causes, whatever it may be, which determines the conception and birth of children would lead us to expect—these inferences are confirmed and strengthened when, for the difference in the mortality occasioned by the element of sex, we substitute the difference due to the element of age. This difference is also very slight, for while the mean annual fluctuation in the deaths under 15 years of age amounts to 9·65, it is 10·84 in the deaths above 60, and 11·38 in the deaths during the intermediate period, from 15 to 60.

Here, again, the difference between the three orders of facts is such a difference as the introduction of the single element of age among the numerous causes which combine to bring about the event of death would naturally lead us to expect. And here, too, there is a difference between the three series of facts too small to give any countenance to the notion that the numerical results have been in any way under the dominion of chance.

If now, from the differences in mortality introduced by sex and age, we pass on to those occasioned by locality, we find ourselves dealing with a new order of figures. Instead of mean fluctuations differing but little from each other, we encounter very considerable divergences. Thus while the mean annual fluctuation in the mortality of the *Northern* district of the Metropolis is only 5·67, that of the *West* district rises to 8·49, that of the *Central* district to 9·45, that of the *East* district to 9·56, and that of the *Southern* district to 21·50. These differences, great as they are, are not more considerable than our knowledge of the powerful influence exercised on human life by locality would lead us to anticipate. It is but reasonable to conclude that the fluctuations in the mortality from year to year on the swampy south bank of the Thames would exceed the fluc-

tuations on the abruptly sloping, hilly, northern bank in a much greater degree than the fluctuation in the mortality of females would exceed that of males, or the fluctuations in the mortality of middle aged or old persons that of children.

From this brief consideration, then, of the figures to which reference has been made, I am led to infer that the differences, whether small or great, between one order of facts and another are not fortuitous, but dependent upon the addition to the multitude of causes co-operating to bring about a given event of a new element of greater or less efficiency, and of which the greater or less force makes itself, so to speak, felt in the figures themselves.

Another inquiry, which may be advantageously instituted as a preliminary to the consideration of the proper subject of this Paper, and by the aid of the facts already published, relates to the force of the human will as compared with other forces. It is certainly interesting, if it be not important, to ascertain whether events brought about wholly or chiefly by the agency of the will display greater or less steadiness, that is to say, more or less considerable fluctuations from year to year, than other events in the bringing about of which the will has either no part at all, or only a very remote and subordinate one.

Now the three orders of facts, births, deaths, and marriages, supply the means of comparing this working of the human will with the operation of other and different causes; for, while the human will, by determining the number of marriages in previous years, is remotely concerned in bringing about the event of birth, and, in a comparatively small number of instances, through unhealthy habits foolishly contracted and perversely cherished, the event of death, a marriage may be said to be in the main an event directly determined by the volition of the parties to the marriage modified and restrained by the wills of parents, guardians, or relatives.

On comparing the three orders of facts, births, deaths, and marriages, we find marriages occupying in point of steadiness, from year to year, an intermediate position between births and deaths, the mean fluctuations being as follows:—

Births 1.95	Marriages 3.75	Deaths 9.51
-------------	-------	----------------	-------	-------------

The order of facts, therefore, which the human will is most influential in bringing about is found to present greater steadiness from year to year than the one which results mainly from the operation of a multitude of causes other than the human will; but less steadiness than the one which, from *a priori* reasoning, we should expect to be least subject to disturbance from volition or from external influences. It is also worthy of remark that the rate of marriage-fluctuation approaches much more closely to the fluctuation in the births than to

the fluctuation in the deaths; and when we reflect that the operation of the human will has already made itself felt as a remote cause of the fluctuation in the number of births, we cannot fail to estimate very highly the uniform and constant operation of those causes which directly determine the conception and birth of children.

As this relative fluctuation in births, deaths, and marriages, is a subject of some interest, I have thought it worth while to extend this comparison from the Metropolis to the whole of England and Wales. The following are the results obtained:—

England and Wales, 15 Years, from 1840 to 1854 inclusive.

Births, annually	32,920	.....	Fluctuation	2.01
per million				
persons living				
Marriages ..	8,205	.....	„	3.29
Deaths ..	22,490	.....	„	5.57

The three orders of facts are here seen to occupy the same relative position for England and Wales as for the Metropolis, the figures having, however, undergone considerable change; the fluctuation in the births being slightly increased (from 1.95 to 2.01) the fluctuations in the marriages being diminished (from 3.75 to 3.29), and the fluctuations in the deaths being also diminished, but more considerably (from 9.51 to 5.57). For all England the rates of fluctuation for births, marriages, and deaths, are as the numbers 2, 8½, and 5½.

It is worthy of remark that this substitution of a large for a comparatively small number of facts, though it changes, and, in two cases (Marriages and Deaths) reduces, the figures representing the mean annual fluctuation, does not alter the relative position of the three orders of facts. The births for all England, as for the metropolis, exhibit the least, and the deaths the greatest, rate of fluctuation.

This reduction in the rate of fluctuation, coinciding in two out of three instances, with an increase in the number of facts, suggests the inquiry whether, as a general rule, the rate of fluctuation does diminish as the number of facts increases.

With a view to the solution of this question, I have placed side by side some of the facts relating to the metropolis, and the corresponding facts relating to the whole of England and Wales, for the seven years 1848 to 1854 inclusive, making use, for this particular purpose, of the original facts as published by the Registrar-General, without correction for increase of population. It will be seen that the diseases chosen for comparison are well defined and easily recognised maladies, likely to be registered with similar accuracy both in town and country.

The facts are comprised in the following table, in which, as just

stated, no correction has been made for increase of population either in London or in England.

TABLE I.

Causes of Death.	LONDON.		ENGLAND.	
	Number of Deaths.	Fluctuation.	Number of Deaths.	Fluctuation.
Measles	1,086	31.50	6,971	33.90
Scarlatina	2,486	45.58	16,249	19.65
Hooping Cough	2,056	31.96	8,736	18.07
Typhus	2,543	19.80	17,844	10.41
Phthisis	6,797	5.79	50,649	5.58
Bronchitis and Asthma	4,578	14.86	21,706	10.72
Cancer	940	4.96	5,255	3.28
Apoplexy	1,270	5.84	8,028	2.95
Delirium Tremens	146	12.00	517	5.06
Violence, Privation, &c.	2,008	8.15	14,129	3.44

With the single exception of Measles, which exhibits a higher rate of fluctuation in the whole of England than in London, the other diseases, in conformity with what we should be led to expect *a priori*, show a higher rate of fluctuation for the smaller than for the larger number of deaths, though the disparity, in one instance, (that of Phthisis, or Pulmonary Consumption,) is very inconsiderable.

As, however, this reduction of the rate of fluctuation might possibly be attributed to the widening of the area over which the observations extend, and not to the mere increase in the number of facts, I have thought it worth while to put the alternative to the test by means of a series of trivial facts progressively increasing in number, of which an account is given in an Appendix. At present I shall content myself with stating that the amount of fluctuation existing between a series of numerical returns diminishes as the facts increase; and I shall make practical use of this principle by contrasting, where it is possible so to do, one series of facts with another of equal, or nearly equal, number.

Before quitting the consideration of the foregoing table, I may observe, (in order to prepare the way for the more exact comparison presently to be made between events brought about by the human will, and those which owe their origin to other causes), that the rate of fluctuation in deaths from Delirium Tremens, brought on as they are, by a more or less deliberate indulgence in habits of intemperance; and in deaths from Violence and Privation, which comprise the fatal issues of voluntary acts, suicidal or homicidal, is comparatively small. The fluctuation for England and Wales in the case of Delirium

Tremens is, in round numbers, only 5 per cent., and in the case of deaths from Violence and Privation, only 3½ per cent.

An inspection of Table I, will also serve to prepare us for the results embodied in the more elaborate tables presently to be submitted. The high rate of fluctuation of the four contagious maladies, Scarlatina, Measles, Hooping Cough, and Typhus Fever, contrasts in a very striking manner with the moderate rate of fluctuation of Bronchitis and Asthma, and the still lower fluctuation of Pulmonary Consumption, Cancer, and Apoplexy; of Delirium Tremens, and deaths from Violence and Privation. The different rates of fluctuation displayed in this table, will serve to show that some interesting and curious results may be expected from the further prosecution of this inquiry.

Having now established, not as new principles, but as special inferences from the facts with which I am now dealing, the three propositions:—1. That the fluctuations which take place in different orders of facts from year to year are not fortuitous; 2. That the amount of fluctuation is in part determined by the number of facts, the rate of fluctuation diminishing as the facts increase; and 3. That the fluctuations in the number of events brought about by the human will may be less considerable than those resulting from the operation of causes over which the will has no control; I proceed to consider the first of the two subjects specified in the title of this paper:—I mean the annual fluctuations in the number of deaths from various diseases.

Before I present the facts themselves for consideration, I may premise that, with a view of avoiding those large fluctuations which are incidental to mere smallness of number in the facts themselves, I propose to exclude from consideration all those diseases which occasion an annual average mortality of less than 100 deaths. The diseases which remain after this elimination, will supply a sufficient number of individual instances to illustrate the few general principles which I am seeking to establish; and will afford the necessary data for that comparison of disease with crime, which forms the second object of this communication.

The following table embodies the results obtained in my former communication, in fifteen out of seventeen of the classes of disease given in the reports of the Registrar General. Diseases of the Skin and Malformations are excluded, as supplying year by year less than 100 facts. The several classes of disease are arranged in the table in the order determined by the amount of fluctuation, that class being placed first which presents the least amount. It should also be borne in mind that the average number of deaths is the calculated average for the metropolis, for 15 years, in a population of one million persons, during a year of 365 days.

TABLE II.

	Average Number of Deaths.	Mean Fluctuation.
Diseases of the Brain, Nerves, &c.	2,858	3.50
" Digestive organs	1,504	4.25
{ Tubercular Diseases	4,427	4.25
Debility from premature birth, &c.	579	5.01
Dropsy, Cancer, and others of uncertain seat	1,236	5.22
*Violence, Privation, &c.	769	6.89
Disease of the Kidneys	231	7.80
" Heart, &c.	785	8.02
" Uterus, viz., Puerperal Disease, &c.	280	9.30
" Joints and Bones, viz., Rheumatism, &c.	189	10.60
Age	1,298	10.71
Diseases of the Respiratory Organs	3,747	11.26
Atrophy	470	14.68
Sudden	292	17.46
Zymotic Diseases	5,957	31.24

In this table I have distinguished, by an asterisk, that class of deaths which is most distinctly affected by the operations of the human will, the majority being directly brought about by human volition; and it will be seen that this class occupies the same sort of intermediate position, between causes of death characterised by a low rate of fluctuation, and causes distinguished by a high rate of fluctuation, which marriages did between births and deaths, the rate of fluctuation in deaths by violence, &c., approximating more closely to the diseases marked by a low rate of fluctuation, than to those subject to a high rate of fluctuation. The table also contains one group in which the number of facts approximates so closely to the number of deaths by violence as to suggest a special comparison of the one with the other. The group in question is that of Diseases of the Heart and large Blood Vessels, in which an annual average of 785 facts yields a mean fluctuation of 8.02, against 6.89, the mean fluctuation in 769 deaths due to Violence, Privation, &c. So that the number of deaths brought about from year to year, chiefly by the misdirected operation of the human will, shows greater steadiness than the similar number of deaths due to one of the best defined classes of disease.

There are some other points in the table worthy of notice. It is certainly a curious circumstance that the fatal diseases which show the greatest freedom from fluctuation, should be diseases of the Brain and Nervous System, which of all diseases most influence human volition; and that the amount of annual fluctuation in this class should be less than in the case of the diseases of any other important organ of the economy. Thus, while the mean fluctuation in the deaths from the Diseases of the Brain and Nervous System is

represented by the low figure 3·50, the fluctuation for Diseases of the Heart, &c., is represented by 8·02; and that for Diseases of the Organs of Respiration, by 11·26. These figures suggest the inquiry, whether the striking difference between the three sets of figures may not be explained by the different degree to which the Diseases of the Brain, Heart, and Lungs, respectively, are influenced by causes external to the body.*

Another group of diseases which will naturally attract attention, is that which stands third in the table, namely, Tubercular Diseases, of which Pulmonary Consumption forms the most conspicuous member. This interesting group shares with Diseases of the Digestive Organs the very low mean fluctuation represented by the figures 4·25. Now it happens that the average annual number of deaths in this class is 4,427—a number differing very slightly from the mortality in the central and northern districts of the metropolis. Hence we are able to obviate any objection which might arise out of a great disparity in the number of our facts, and to make the following instructive comparison:—

	Deaths.	Fluctuation.
Tubercular Diseases	4,427	4·25
Northern Districts	4,670	5·67
Central Districts	4,402	9·45

* Since this Paper was read I have had occasion to refer to the Registrar-General's "Summary of Births, Deaths, and Causes of Deaths in London for the 15 years 1842-1856," in which I find an interesting comparison between the deaths in London in 10 cold and 10 warm days occurring in the months of November and December, 1856, which comparison goes far to answer this question. Between the mean temperature of the 10 cold and 10 warm days there was a difference of about 20° Fahr.; and the deaths from the three causes mentioned in the text were affected to the extent shown by the following figures:—

	10 Warm Days.	10 Cold Days.	Increase.
Pulmonary Consumption	163 deaths	232 deaths	+ 42 per cent.
Bronchitis and other Dis- eases of the Lungs.....}	394 "	502 "	+ 27 "
Diseases of the Heart	51 "	73 "	+ 31 "
Diseases of the Brain	172 "	170 "	.....

The extraordinary steadiness of Diseases of the Brain contrasts, in a very striking manner, with the increased mortality from Diseases of the Heart and of the Lungs; and it will be seen that these figures afford a very striking confirmation of the results obtained in the text, and an unexpected answer in the affirmative to the question there raised. If Consumption were included in one class with other Diseases of the Chest the figures would follow the same order as those quoted in the text.

The inferences to be drawn from this comparison admit of being strengthened, by separating from the compound group of Tubercular Diseases (Scrofula, Tabes Mesenterica, Phthisis, and Hydrocephalus) the single disease Phthisis or Pulmonary Consumption.

This disease occasions a mean annual mortality of 3,230, or little short of the deaths in the western district of London, and of the mortality from Diseases of the Organs of respiration, exclusive of Deaths from Consumption. Hence the following comparison:—

	Deaths.	Fluctuation.
Pulmonary Consumption	3,230	4.45
Western Districts	3,676	8.49
Diseases of Lungs, &c., (exclusive of Consumption) }	3,747	11.26

From the first of these comparisons we learn that Tubercular Diseases, due to a natural infirmity or degeneracy of the body itself, give rise to a mortality subject to less fluctuation than that which belongs to the district of the metropolis showing the greatest steadiness in this respect; and from the second, that Pulmonary Consumption, the most important disease of the Tubercular class, shows the same steadiness when compared with the deaths in the western district of London, or with the mortality from Diseases of the Lungs and Air-Passages, from which this important disease—Consumption—has been excluded. Table I. had already taught us that Cancer and Apoplexy,—diseases also dependent upon peculiar structural changes—present a degree of steadiness still more remarkable.

If we were to seek for a striking contrast to this small fluctuation in the class of Tubercular diseases, and in other groups at the head of Table II, we should find it in the extraordinary fluctuation in the mortality from Zymotic Diseases, which, on an average of about 6,000 deaths, displays the high mean fluctuation of 31.24.

Table II, then, has afforded some confirmation to the inference that events brought about by the operation of the human will display, in respect of mean annual fluctuation, a degree of steadiness intermediate between the extremes of fluctuation observable in events over which the human will exercises no control; and it has also taught us that diseases dependent on degeneracy of the structure of the body, recur from year to year with a regularity which contrasts very strikingly with the violent annual fluctuations occurring in the class of diseases most subject to external influences.

I now proceed, by the aid of a table of special diseases, to inquire how far these results admit of confirmation or otherwise.

From Table III, as from Table II, all those diseases are omitted

which occasion, on an average, less than 100 deaths per annum; and the remaining causes of death are arranged in the order of the amount of fluctuation.

I shall also enlarge the table by introducing, in their proper places, the fluctuations embodied in Table II, or noticed in previous parts of this paper. It will also be observed that the table is arranged in two columns, the left-hand column commencing with the highest, and the right-hand column with the lowest, fluctuation, so as to bring the extremes into juxtaposition. In order still further to facilitate the work of comparison, the columns of mean fluctuation are brought into contact with each other. The last half of the table must, of course, be read backwards.

TABLE III.

Showing the Fluctuations from Various Causes in the 15 Years, 1840 to 1854 inclusive.

Cause of Death.	Number of Deaths.	Mean Fluctuation.	Mean Fluctuation.	Number of Deaths.	Cause of Death.
1. Cholera	780	153.97	3.50	2,858	Diseases of the Brain and Nerves
2. Influenza	110	95.45			Do. (residue)..... 61
3. Small Pox	399	69.92	4.16	264	Diseases of Organs of Digestion
4. Scarletina	899	59.51	4.25	1,504	Tubercular Diseases
5. Measles	575	41.74			Pulmonary Consumption ... 59
6. Zymotic Diseases	5,957	31.24	4.25	4,427	Inflammation of the Brain... 57
7. Hooping Cough	857	31.04	4.43	3,230	Debility from Premature Birth, &c.
8. Diarrhoea	747	29.45	5.00	280	Dropsy, Cancer, &c..... 55
9. Typhus Fever	951	23.55	5.01	579	North District of London... 54
10. Bronchitis	1,148	22.12			Water on the Brain
11. South District of London.....	6,535	21.50	5.22	1,226	Paralysis
12. Asthma	452	19.47	5.67	4,670	Cancer
13. Erysipelas	164	17.68	6.00	767	Violence, Privation, &c. ... 50
14. Causes not specified	170	17.65	6.11	458	Convulsions
15. Sudden	292	17.46	6.60	349	Apoplexy
16. Scrofula	122	14.75	6.89	769	Diseases of the Kidneys 47
17. Atrophy	470	14.68	6.92	1,098	Diseases of the Heart, &c. ... 46
18. Tabes Mesenterica	307	12.70	7.06	524	West District of London 45
19. Teething	325	12.48	7.80	231	Disease of Kidneys (residue) 44
20. Dropsy	588	12.41	8.02	715	Inflammation of the Stomach and Bowels
21. Diseases of the Stomach (residue)	131	12.21	8.49	3,676	Croup
22. Epilepsy	132	12.12	8.50	153	Deaths, all causes, Males ... 41
23. Age 15 to 60	8,263	11.38	8.86	316	Puerperal Diseases, &c. 40
24. Diseases of Organs of Respiration	3,747	11.26	8.98	167	Deaths, Central District of London
25. Diseases of the Lungs (residue)	282	10.99	9.26	12,629	Deaths, All Causes
26. Inflammation of the Lungs	1,740	10.92	9.30	280	Deaths from specified causes 37
27. Child-birth	193	10.88	9.45	4,402	Deaths Eastern District of London
28. Deaths at ages 60 and upwards.....	4,987	10.84	9.51	24,864	Deaths at ages 0—15
29. Age	1,298	10.71	9.55	24,712	Diseases of Liver
30. Thrush	103	10.68	9.56	5,435	Deaths, all causes, Females 33
31. Rheumatism, &c.	189	10.60	9.65	11,499	Rheumatism (residue)
			9.88	241	
			10.00	12,240	
				101	

Now it will be observed that this table is unequally divided by the mean fluctuation in deaths from All Causes amounting to 9·51, into two parts, the first consisting of 87 causes of death, the second of 24 causes of death. The first section contains all the causes of death in which the mean fluctuation exceeds $9\frac{1}{2}$ per cent.; the second section all those in which it falls short of $9\frac{1}{2}$ per cent. In the first section it will be observed that all the diseases belonging to the Contagious, Epidemic, or Zymotic class find their place; while in the second section there is a very marked predominance of diseases of a very defined character, and of those attacking particular organs or parts of the body. If we examine the table still more narrowly, we find that the leading Zymotic maladies are all comprised in the first 18 causes of disease; while, on the other hand, Tubercular Diseases, Pulmonary Consumption, Water on the Brain (classed in the returns of the Registrar General with Tubercular Diseases) Paralysis, and Cancer; in other words, all the best defined instances of degeneracy in the structure of the body itself are to be found in the last 18 causes of death.

If to the first 18 causes of death we add two more, making up the number to 15, we reach a part of the table separated from that which succeeds it, by nearly 8 per cent., and characterised by a very high rate of fluctuation. Taking this group of 15 causes of death as the basis of an arbitrary division of the table for purposes of comment and comparison; and separating at the other end of the table the same number of causes, we may conveniently divide the remainder of the table into two other parts, the one comprising 17 causes of death, the other 15 causes. We shall thus have four groups of causes of death, as follows:—

- 1st Group, 15 causes, ranging from 153·97 down to 17·46
- 2nd Group, 17 causes, ranging from 14·75 down to 10·00
- 3rd Group, 15 causes, ranging from 9·88 down to 7·80
- 4th Group, 15 causes, ranging from 7·06 down to 3·50

This division is an arbitrary one, only to be defended on the plea of convenience, but likely to help us in arriving at some definite results.

The first group of 15 causes of death comprises, as has been already stated, all the chief contagious and epidemic maladies—Cholera, Influenza, Small Pox, Scarletina, Measles, Hooping Cough, Diarrhœa, Typhus Fever, and Erysipelas. It also contains the mixed group of Zymotic Diseases made up of these fatal maladies, and of some smaller groups containing each less than 100 facts; and that chosen resort of Zymotic Disease, the South District of London. Out of these 15 causes of death, 11 are either individual diseases of the Zymotic class, or the Zymotic group, or the district in which

Zymotic diseases notoriously prevail. Of the four remaining heads, one consists of the deaths returned by the Registrar-General under the designation of "Causes not Specified," another of the somewhat indefinite class designated "Sudden;" the remaining two being the nearly allied diseases—Bronchitis and Asthma.

Of the group headed "Causes not Specified," it may suffice to observe that it presents, in the space of 15 years, irregularities to be accounted for, only on the supposition of a change in the practice of the Registrars, or in the mode of abstracting the facts; though it is worthy of remark that the largest number of deaths under this heading was registered in the year 1854, when the deaths in the Zymotic class were unusually high. The number of deaths registered under the head of "Causes not Specified," in the 15 years beginning 1840, and ending 1854, were as follows:—

260, 233, 236, 212,—105,—86, 86, 61,—115, 135, 150, 164, 170,—271, 275

The deaths entered as "Sudden" present analogous features, due probably to the same cause; and they were also in excess when the deaths under the head of Zymotic diseases were most numerous. The following is the number of sudden deaths in the same 15 years:—

400, 406, 455,—343, 292, 257, 200,—302, 264, 314, 291, 218, 179, 198, 260

The two remaining causes of death comprised in the first group of 15, may, for all practical purposes, be regarded as the same disease under two different names, the fashionable term "Bronchitis" having been largely substituted for the less favourite word "Asthma." The substitution of one for the other is obvious from the following comparison:—

Bronchitis	{	271, 355, 355, 415, 578, 816, 1,154, 1,948, 1,358, 1,425, 1,415
		1,687, 1,552, 2,053, 1,814
Asthma	{	728, 722, 581, 552, 585, 532, 381, 605, 297, 289, 313, 345, 260,
		332, 264

In the one case an increase, subject to considerable fluctuations, from 271 to 1814; in the other, a falling off subject to similar fluctuations, from 728 to 264! But the most cursory examination of these figures will show that after due allowance has been made for any change in the registration or abstraction of facts, great and striking fluctuations do occur, which are in keeping with what we know of the causes of these two fatal diseases, namely, the degree and duration of cold in the winter season—a cause which is probably nearly as variable in its intensity in different years as the atmospheric states, whatever they may be, which favour the spread of the several epidemic maladies.

From what has been stated, then, it follows that the causes of death characterised by the greatest amount of fluctuation, from

year to year, are the Zymotic Diseases, and the two affections of the chest—Bronchitis and Asthma; the Zymotic Diseases being under the influence of obscure atmospheric changes, the two diseases of the lungs being mainly due to a more appreciable—but still very variable—state of atmosphere, viz., cold.

The second group, of 17 causes of death, is of a more mixed and complex order. At the head of it stand two diseases of a somewhat ill-defined character, namely, Scrofula and Atrophy. A more definite disease, both in its nature and seat, *Tabes Mesenterica*, follows next in order; then Teething; then that symptom and common termination of several fatal maladies, *Droopy*. Diseases of the Stomach and Epilepsy complete, with the three last named, a small group of causes of death shewing a fluctuation of upwards of 12 and less than 13 per cent. Deaths from the age of 15 to that of 60 follow next, and then the whole class of diseases of the Organs of Respiration. This compound class presents a lower rate of fluctuation (11·26) than the two diseases, Bronchitis and Asthma, which brought up the rear of the first group of 15, the one with a mean fluctuation of 22·12, the other of 19·47; but still a rate of fluctuation considerably exceeding the rate for all causes, which is 9·51. Diseases of the Lungs, &c., being the residue of Diseases of the Organs of respiration (Bronchitis and Asthma, Phthisis and Croup, being excluded) yield the somewhat lower figure of 10·99, and Inflammation of the Lungs 10·92. This second group of 17 is completed by Childbirth; the age from 60 upwards; Age, in a less defined sense; Thrush, a fatal disorder of infancy; and Rheumatism.

The general results of a review of the first two groups taken together, may be thus briefly expressed:—

The diseases of the Zymotic class are characterised by the highest mean fluctuation; the diseases of the Organs of Respiration (with the exception of Consumption and Croup) are distributed through the first and second groups; and the second group also contains a disease, Rheumatism, greatly affected, as are most diseases of the lungs, by atmospheric changes.

The third group of 15 causes of death, which includes the class of deaths from all causes, consists chiefly of causes of death slightly modified from the average of deaths from all causes, by the introduction of the elements of sex, age, and locality; and in addition to these, of the class of Diseases of the Liver, with a fluctuation of 9·83; Puerperal diseases, &c., with a fluctuation of 9·30; Croup, with a fluctuation of 8·98; Inflammation of the Stomach and Bowels, with a fluctuation of 8·86; and diseases of the Heart and Kidneys, with a fluctuation respectively of 8·02 and 7·80.

The fourth and last group of 15 causes of death presents several points of interest. It embraces the entire class of Diseases of the

Brain and Nerves, with the lowest mean rate of fluctuation (3.50) in the whole table; as well as the residue of the same diseases; and the special diseases, Inflammation of the Brain, Water on the Brain, Paralysis, Convulsions, and Apoplexy, all remarkable for a low figure of fluctuation. This group also comprises the whole class of diseases believed to have a tubercular origin, as well as Pulmonary Consumption and Water on the Brain, members of that class; and Cancer. Scrofula, and Tabes Mesenterica, two other diseases placed by the Registrar-General in the group of Tubercular Diseases, occupy places in the second group, their right to which place will be presently considered. In this last group, too, we encounter the interesting class of Violence, Privation, &c., characterised by the low rate of fluctuation 6.89. The headings not yet noticed, and which serve to complete the group, are Diseases of the Organs of Digestion, Debility from Premature Birth, the mixed group Dropsy, Cancer, &c., and the North District of London—a district characterised, as before observed, by an unusual absence of fluctuation in the deaths which take place within its limits.

I have stated incidentally that I should presently contest the right of two diseases, Scrofula and Tabes Mesenterica, to the high rate of fluctuation given in the table. The ground upon which I make this statement is the striking contrast observable in the number of deaths per million in the first and last years of the series of 15 years. The figures differ so widely as to justify the suspicion that the numbers of deaths returned under these heads have been determined in part, at least, by better medical information, on the part of registrars, or greater care (the result of instructions from head quarters,) and, in some degree, by the changes which have almost imperceptibly taken place in medical nomenclature. As, however, a review of these two diseases, or of any other small number of diseases, simply on the ground that their position in the table, and their separation from other diseases believed to be of the same class, had excited some suspicion of their being wrongly placed, would lay me open to a charge of one-sidedness, I propose to prepare another table in which the average fluctuation shall be restricted to the last 7 years of the 15. By comparing this table with Table II, it will be easy to see what causes of disease are entitled to retain their places, and which of them have probably been influenced by extraneous changes of the kind just referred to.

The more limited term of years will also offer the not inconsiderable advantage of a more ready and more extensive comparison with crime and with other orders of facts subject, in common with disease, to fluctuations in their numbers from year to year.

TABLE IV.

Showing the Fluctuations in the Deaths from Various Causes in the 7 Years
1848—1854.

Cause of Death.		Number of Deaths.	Mean Fluctuation.	Mean Fluctuation.	Number of Deaths.	Cause of Death.	
1	Cholera	1,619	168·13	2·04	1,014	Dropsy, Cancer, &c.	(55) 62
2	Influenza	98	78·57	3·03	2,634	Diseases of Brain, &c.	(62) 61
3	Small Pox	351	50·14	4·53	1,354	Organs of Digestion	60
4	Scarlatina	1,053	46·72			Cancer	59
5 (6)	Zymotic Diseases.....	7,195	45·39	3·58	395	{ Diseases of Brain, &c.	58
6 (11)	South District of London	6,832	35·58	3·60	268	{ (residue)	
7 (8)	Diarrhoea	1,037	31·82	4·28	187	{ Disease of Kidneys (44) 57	
8 (7)	Whooping Cough	863	31·52	4·50	275	{ (residue)	
9 (5)	Measles	458	30·79	4·74	246	Disease of Kidneys	(47) 56
10 (23)	Age 15 to 60	8,469	19·82	4·80	873	Disease of Liver.....	(34) 55
11 (9)	Typhus Fever	1,075	18·51	4·85	350	Disease of Heart, &c.	(46) 54
12 (15)	Sudden	246	17·89			Dropsy	(20) 53
13	Erysipelas	174	17·24	4·94	232	{ Inflammation of the (57) 52	
14 (33)	Deaths, all causes (Females)	12,428	16·83	4·97	4,809	{ Brain	
15 (12)	Asthma	300	16·00	5·25	4,038	{ Deaths, North District (54) 51	
16	Deaths from specified causes	25,034	15·68	5·38	201	{ of London	
17 (38)	Deaths, All Causes	25,198	15·67	5·54	535	Tubercular Diseases	(59) 50
18 (35)	Deaths at ages 0—15	11,615	14·98	5·63	610	Rheumatism, &c.	(31) 49
19 (36)	Eastern District of London	5,459	14·82	5·74	958	Apoplexy	
20 (41)	Deaths, all causes (Males)	14,428	14·56	5·75	2,861	{ Debility from Premature (56) 47	
21 (14)	Deaths from causes not specified	183	14·21	6·26	642	{ Births	
22 (40)	Deaths, West District of London	3,720	13·66	6·35	860	Age.....	(29) 46
23 (28)	Deaths at age 60 and upwards	4,921	13·22	6·42	475	{ Pulmonary Consump- (58) 45	
24 (10)	Bronchitis	1,619	13·22	6·76	843	{ tion	
25 (19)	Teething	244	12·30	7·74	198	Water on the Head	(53) 44
26 (27)	Child-birth	194	12·28	7·84	370	Convulsions	(49) 43
27 (17)	Atrophy	616	12·17	8·13	123	Paralysis.....	(52) 42
28 (22)	Epilepsy	144	11·57	9·30	283	Violence, Privation, &c.	(50) 41
29 (30)	Thrush	72	11·04	9·70	165	{ Inflammation of the (43) 40	
30 (24)	Organs of Respiration	3,768	10·60	9·75	123	{ Stomach and Bowels	
31 (39)	Deaths, Central Dist. of London	4,125	10·39	9·91	1,508	Tabes Mesenterica.....	(18) 39
				9·94	181	{ Rheumatism, &c. (re- (52) 38	
						{ (sidue)	
						Puerperal Diseases.....	(40) 37
						Scrofula	(16) 36
						Croup.....	(42) 35
						{ Diseases of Stomach (21) 34	
						{ (residue)	
						Inflammation of Lungs (26) 33	
						{ Diseases of Lungs (re- (25) 32	
						{ (sidue)	

The first circumstance which claims attention in this table, as compared with Table III, is the greatly increased rate of fluctuation prevailing during the shorter period of 7 years in the deaths from all causes, and in the several smaller groups formed out of this principal group, by introducing the elements of sex, age, and locality. The group of deaths from All Causes, instead of being the 88th in Table III, is the 17th in Table IV, and the smaller groups just specified

are found to undergo a similar change of place. This change is fully accounted for by the occurrence, within this septennial period, of two outbreaks of Asiatic Cholera. This same circumstance explains the higher position in the table occupied by the class of Zymotic diseases; the deaths in that home of Zymotic diseases, the South District of London; and the much higher place taken by deaths between the ages of 15 and 60, when this class of diseases is known to be peculiarly prevalent.

Of this class of Zymotic diseases it will suffice to state that their place in the table has undergone little alteration. Cholera, Influenza, Small Pox, and Scarlatina, retain their places, the first with increased, the last three with diminished, fluctuation; while Diarrhœa, Hooping Cough, Measles, Typhus Fever, and Erysipelas, undergo, with the exception of the last-named, some change of position.

Asthma occupies a somewhat lower place, and is separated from Bronchitis by seven groups headed by deaths from all causes, the remainder being formed from that larger group by the introduction of the elements of sex, age, and locality. Diseases of the Organs of Respiration, Diseases of the Lungs (residue), and Inflammation of the Lungs, are degraded from their high position in Table III, in consequence chiefly of the intrusion of the larger groups (deaths from all causes, &c.,) just referred to. But they continue to occupy a second place to the class of Zymotic diseases.

Scrofula and Tabes Mesenterica, (diseases classed in the returns of the Registrar-General with Pulmonary Consumption and Water on the Brain as "Tubercular Diseases,") will be found, as I had anticipated, to have undergone a great change of position. Scrofula, from being 16th in Table III, is 36th in Table IV, and Tabes Mesenterica, which held the 18th place in Table III, holds the 39th in Table IV. On the other hand, in consequence of Pulmonary Consumption and Water on the Brain taking a higher place in Table IV, the several members of this mixed class of Tubercular diseases are much nearer to each other.

Dropsy is another disease, or, to speak more justly, a symptom of several fatal maladies, which has undergone a very great displacement. Instead of being 20th in Table III, it has fallen to No. 53 in Table IV, coming next in order to Diseases of the Heart, Liver, and Kidneys, of which it is so common a consequence, Diseases of the Liver having fallen from the 34th to the 55th place, as if to vindicate their alliance with Dropsy. Diseases of the Brain occupy the last place but one in Table IV, instead of the last place in Table III, and the Special Diseases of the Brain, (Inflammation, Apoplexy, Convulsions, and Paralysis, together with Water on the Brain,) are all to be found in the portion of the table occupied by diseases of a low rate of fluctuation. Cancer takes a still lower place than in Table III,

and ranks among the diseases characterized by a very low rate of fluctuation.

On the whole it may be safely affirmed of Table IV, that it is, to a great extent, confirmatory of the results obtained in Table III, while it corrects some errors of position arising out of the changes in registration due to the lapse of time, the alterations which have taken place in medical doctrines and nomenclature, and the considerable improvements brought about in medical diagnosis.

If now we omit from Table IV all the general headings, and retain only well-defined diseases, as is done in the next table (Table V) it will be possible to arrive at some general conclusions worthy of note. With a view to simplicity, the numbers of the facts are omitted, and the rate of fluctuation is expressed in the round numbers most nearly approximating to the true figures.

TABLE V.
Special Diseases only.

Cause of Death.	Fluctuation.	Cause of Death.	Fluctuation.
1. Cholera	168	14. Inflammn. of Lungs	10
2. Influenza	79	15. Croup	10
3. Small Pox	50	16. Scrofula	10
4. Scarlatina	47	17. Tabes Mesenterica..	8
5. Diarrhoea	32	18. Paralysis	6
6. Hooping Cough	32	19. Convulsions	6
7. Measles	31	20. Water on the Brain	6
8. Typhus Fever.....	19	21. Pulmonary Con- }	6
9. Erysipelas	17	sumption	6
10. Asthma	16	22. Apoplexy	6
11. Bronchitis	13	23. Inflammation of }	5
12. Epilepsy	12	the Brain	5
13. Thrush	11	24. Cancer	4
Violence, Privation, &c..... 7.			

The inferences to be drawn from this table are, perhaps, best expressed by resolving it at once into the elements of which it seems to consist.

1. In the first place, we have all the diseases of the Zymotic class, except Thrush, comprised in the first 9 members of the table. The rate of fluctuation of this important class of diseases ranges from 168 down to 17, the exceptional disease, Thrush, having the lower rate of 11.

2. The second place is occupied by the four diseases of the organs of respiration—Asthma and Bronchitis, Inflammation of the Lungs and Croup; of which the first two are separated from the last two by the intervention of Epilepsy and Thrush. These diseases of the organs of respiration have a rate of fluctuation ranging from 16 down to 10.

3. The remaining diseases consist of two classes interwoven, so to speak, the one with the other, and having jointly a rate of fluctuation ranging from 10 down to 4. The one class consists of the diseases traceable to tuberculous or other degeneration of the textures of the body, and comprises Scrofula, Tabes Mesenterica, Water on the Brain, and Pulmonary Consumption; the other class includes Paralysis, Convulsions, Apoplexy, and Inflammation of the Brain. The first class presents a range of fluctuation from 10 down to 6; the second class, the more limited range, from 6 to 5. To the second class belongs the exceptional disease, Epilepsy, with a fluctuation of 12; to the first class may be assigned, as having a remote relationship to its other members, Cancer, with the low fluctuation of 4.

4. The deaths due to Violence, Privation, &c., in the bringing about of which the human will bears a prominent part, have a fluctuation of 7, and would find their proper place towards the end of the table, occupying the 18th place in 25 places.

To make this short summary complete, it is only necessary to add that the best defined classes of disease—Diseases of the Brain, of the Alimentary Canal, of the Liver, of the Heart, of the Kidneys—are all to be found in Table IV, in that part of the table which exhibits the lowest rates of fluctuation, namely from 2 to 5 per cent.

The foregoing inferences admit of being compressed into the following short proposition:—

The highest rate of fluctuation belongs to diseases of the Zymotic class; an intermediate rate to diseases of the organs of respiration; the lowest rate to other local diseases, including those which consist in a degeneracy of the textures of the body; and a low rate of fluctuation to that class of deaths in which human volition plays a principal part.

Or, if causes may be substituted for effects, the proposition will assume this shape:—The causes which give rise to epidemic maladies are subject to great variations of intensity from year to year; those which occasion diseases of the organs of respiration are less variable in their operation; while the changes that take place within the body itself, and issue in the production of fatal local diseases, display an extreme degree of steadiness and uniformity.

It has been already stated, more than once, that the mixed group of causes of death, headed Violence, Privation, &c., in the production of which the human will plays so conspicuous a part, presents a very moderate amount of fluctuation. It will be interesting to inquire whether this moderate rate of fluctuation also obtains in the returns of deaths from causes more or less completely within the control of the human will; whether in the shape of homicide or suicide, or as the result of a neglect more or less deliberate of due precaution against accident. The facts of this order, which are best obtained from the Registrar General's returns for all England, are

embodied in the following table. In using this table, it is necessary to premise that the annual figures are not corrected for increase of population, and that they relate to the deaths of males only.

TABLE VI.

Violent and Accidental Causes of Death in England.—7 Years, 1848-1854.

Cause of Death.	Number.	Fluctuation.	Cause of Death.	Number.	Fluctuation.
Intemperance	232	12·43	Fractures and Contusions	4,008	6·07
Drowning	2,012	8·45	Wounds	482	5·12
Poison	235	7·80	Delirium tremens	517	5·06
Hanging and Suffocation	825	6·34	Burns and Scalds	1,312	3·96

Violence, Privation, &c., being the aggregate of the above.... 3·44

The highest amount of fluctuation shown in this table—that of intemperance—falls short of the fluctuation in most Zymotic maladies. With the single exception of intemperance, too, the rate of fluctuation is lower than that of the principal diseases of the organs of respiration (Consumption excepted); while the lower rates of fluctuation are such as we meet with in diseases characterized by the greatest steadiness, from year to year.

I now proceed to the second division of this Paper, in which I propose to compare the Fluctuations in Disease with the Fluctuations in Crime, and in other events within and beyond the control of the human will.

The facts which I shall use to illustrate the Fluctuations in Crime are contained in a return of the "Number of Persons taken into Custody by the Metropolitan Police, and the Results in the year 1855, with Comparative Statements from the year 1831 to 1855 inclusive." This return embraces the 15 years from 1840 to 1854, in respect of the leading results of the apprehension of offenders; and it also presents for each of the 7 years 1848 to 1854, the number of persons committed for trial or bailed, under certain general heads, or classes, of crime. I shall also make use of the similar facts for the whole kingdom contained in Mr. Redgrave's last return.

I begin my comparison of disease and crime by presenting, in a tabular form, the leading results of the apprehension of some 60,000 persons, brought before the Police Magistrates of the Metropolis every year. After calculating the mean annual rate of fluctuation in the numbers representing these results, in the same way as in the case of the diseases proving fatal to the same population, I shall place the figures representing the fluctuations in question in juxta-

position with the fluctuations in the same mean number of deaths from various causes; or, where an equal number of facts is not to be obtained, the nearest approach to the mean number which the tables of mortality supply.

The following table presents the results of this comparison:—

TABLE VII.
Comparison of Disease and Crime (The Metropolis)—1840–1854.

DEATHS.			CRIMES.		
Causes of Death.	Number of Deaths.	Fluctuation.	Fluctuation.	Number of Cases.	How disposed of.
Deaths from all causes	24,864	9.51	4.81	28,306	{ Summarily disposed of, or held to bail.
„ 60 and upwards	4,987	10.84	7.60	4,710	{ Committed for trial.
„ North Districts	4,670	5.67			
„ Central Districts	4,402	9.45			
„ from Tubercular Diseases	4,427	4.25			
„ West Districts	3,676	8.49	8.06	3,654	{ Convicted and sentenced.
„ from Diseases of Organs of Respiration }	3,747	11.26			
„ from Pulmonary Consumption	3,230	4.45			
„ from Diseases of the Heart, &c.	785	8.02	9.92	722	Acquitted.
„ from Diarrhoea	747	29.45			
„ from Cholera	780	153.97			
„ from Water on the Brain	767	6.00			
„ from Puerperal Diseases, &c.	280	9.30	12.82	283	{ Bills not found, or not prosecuted.
„ Sudden	292	17.46			
„ from Inflammation of the Brain	280	5.00			
„ from Disease of the Lungs, (residue) }	282	10.99			
Births	32,028	1.95	3.66	34,598	{ Discharged by the Magistrate

In this table we have as fair a comparison as the nature of the case allows between deaths from disease, which are to a great extent beyond human control, and the issue of cases brought before the Police Magistrates for adjudication. Both classes of facts are remarkable for the number of concurrent causes which must have conspired to bring about each distinct event. In deaths from disease there are influences prior to birth determining the peculiar constitution of each individual; influences within and beyond his

will, affecting him during the whole course of his life; and causes acting with greater or less force to determine the result of his last illness. On the other hand, the events recorded on the other side of the table have been similarly influenced by the original character of the persons who have actually committed crime, by their education and acquired habits, their position in life, and the society in which they have been placed. The number of persons taken into custody is further influenced by the efficiency of the police, and the disposal of them by the evidence which happens to be forthcoming, and the effect of that evidence on the mind of the magistrate. So that this table presents, in striking contrast, two series of events, each brought about by the successive or simultaneous operation of a great number of causes, chiefly physical in the one case, chiefly moral in the other; and we find (contrary to what we should probably, all of us, have concluded *à priori*) that the events brought about by the co-operation of moral causes are as free from fluctuation as the events determined by the joint operation of physical causes. For while the mean fluctuation for crime ranges from 4.81 to 12.82, the range of fluctuation for disease is from 4.25 to 158.97, or, excluding this last figure, as belonging to Asiatic Cholera, from 4.25 to 29.45. It is also worthy of remark that the highest fluctuation for crime (12.82) is exceeded by the rate of fluctuation of all the Zymotic diseases, with the exception of Thrush, by the rate of fluctuation in Bronchitis and Asthma, and in no less than five other less distinctly defined causes of death. (See the first 17 causes of death in Table III.) Five other causes of death also exhibit nearly the same amount of fluctuation; so that in 22 out of 62 instances the fluctuation in disease surpasses, or nearly equals, the fluctuation in the facts representing the disposal of criminals.

It may be stated, therefore, in general terms, that the rate of fluctuation due to the concurrent operation of a large number of moral causes, falls short of the fluctuation observed in the class of Zymotic diseases, in which the most variable and obscure of atmospheric influences is brought to bear on the human body, already largely affected by the operation of other physical causes, whether within itself or external to it.

The comparison made at the foot of the table, between the fluctuation in the number of births and the fluctuation in the number of persons discharged by the magistrates, shows a less degree of steadiness in the latter class of facts, but still a small amount of fluctuation, which approximates very closely to the fluctuation (3.75) in the case of marriages.

I now proceed, by means of a table constructed in the same manner as Table VII, but based upon 7 instead of 15 years, to contrast deaths from disease with the committals for trial and with the committals for certain distinct classes of crime.

TABLE VIII.

Comparison of Disease and Crime. (The Metropolis.) 7 Years—1848–1854.

DEATHS.			CRIMES.		
Causes of Death.	Number of Deaths.	Fluctuation.	Fluctuation.	Number of Crimes.	Nature of Crimes.
Asthma	300	16·00	13·61	301	{ Offences against the person.
Sudden	246	17·89	12·83	248	{ Offences against property with violence.
Teething	244	12·30			
Diseases of Liver.....	246	4·74	21·84	245	{ Forgery and offences against the currency.
Deaths, West District	3,720	13·66	5·48	3,860	{ Offences against property without violence.
Organs of Respiration	3,768	10·60	7·31	3,841	{ Convicted and sentenced.
All causes	25,198	15·67	4·16	36,400	{ Discharged by the Magistrates. Summarily disposed of or held to bail.
			3·21	30,237	
Deaths at age 60 and upwards	4,921	13·22	7·01	4,728	Committed for trial.
Deaths in North District	4,809	4·97			
Water on the Brain.....	642	6·26	9·28	711	Acquitted.
Erysipelas	174	17·24	12·59	175	{ Bills not found, or not prosecuted.
Child-birth	194	12·28			
Diseases of Lungs (residue)	181	9·94			
Scrofula	165	9·70			
Inflammation of Stomach and Bowels	198	7·74			
Diseases of Kidneys (residue)	187	4·28			

In this table the mean annual fluctuation in crimes, and in the issue of cases brought before the magistrates, ranges from 3·21 to 21·84; while the mean annual fluctuation in the causes of death selected for comparison has a somewhat more limited range, from 4·28 to 17·89. Nevertheless, it will be observed that this highest rate of fluctuation attained by crimes, and shown in the issue of cases brought before the magistrates, falls short of the rate of fluctuation in the case of all the more important diseases of the Zymotic class. Cholera, Influenza, Smallpox, Scarlet Fever, Hooping Cough, and Measles, all show a rate of fluctuation greatly in excess of the high rate of 21·84,

which marks the criminal class of forgery and offences against the currency. The rate of fluctuation in Measles, which stands at the bottom of this short list of Zymotic maladies, is in round numbers, 81; the rate of fluctuation in the class of offences just named being 22.

I now proceed to compare the criminal returns for all England with disease, as it affects the whole country. In making this comparison, I shall not introduce any correction for increase of population; I shall contrast, as in the last table, equal, or nearly equal, numbers of crimes and of deaths from disease; and I shall arrange the facts in the order of the magnitude of the fluctuation in the column of crimes.

TABLE IX.
Disease and Crime.—England.—7 Years, 1848-54.

DEATHS.			CRIMES, &c.		
Causes of Death.	Number of Deaths.	Fluctuation.	Fluctuation.	Number of Crimes.	Nature of Crimes, &c.
Purpura and Scurvy....	263	5·51	22·44	251	{ Malicious offences against property.
Mortification	1,300	7·13	20·05	1,266	{ Offences against Mutiny Act.
Disease of Spleen.....	61	14·20	18·49	58	{ Sentenced to death.
			17·77	788	{ Miscellaneous.
Malformations.....	821	5·38	8·25	794	{ Forgery and offences against the currency.
			9·54	2,053	{ Offences against the person.
Erysipelas	2,136	8·45	5·44	1,966	{ Offences against property, with violence.
					{ Committed to same prison once.
Scarlatina	16,249	19·65	8·01	16,199	{ Summarily convicted.
Zymotic Diseases	98,397	26·27	7·34	76,280	{ Remanded and discharged.
Tubercular Diseases ..	65,660	4·90	6·75	10,665	{ Committed to same prison four times.
			4·13	9,362	{ Debtors and civil process.
Dropsy.....	10,124	3·96	5·48	8,657	{ Want of sureties.
			4·92	3,742	{ Committed to same prison three times.
Hooping Cough	8,736	18·07	3·19	3,752	{ Commitments.
Disease of Liver	3,796	3·81	4·67	28,123	{ Committed to the same prison twice.
Age	26,637	4·99	4·52	7,088	{ Offences against property without violence.
Measles	6,971	33·90	3·38	22,270	
Pneumonia	22,057	5·35			

This table agrees with Table VII, in assigning to deaths from disease a higher fluctuation than to crime and the disposal of criminals. In Table VII, the highest rate for crime is exceeded by the highest rate for deaths by disease in three instances, in Table IX in two instances. In Table IX, however, there are a greater number of instances in which the rate of fluctuation for crime exceeds the rate of fluctuation for the diseases compared with it than in Table VII.

But if we strike an average of the rates of fluctuation for crime and for disease, in the three Tables VII, VIII, and IX, we find that they agree in giving for crime a lower rate of fluctuation than for deaths by disease, in the proportion of 9, 10, and 9, to 19, 11, and 12; or (excluding Cholera from Table VII) 9, 10, and 9, to 10, 11, and 12. There is reason, therefore, to believe that, taking the facts relating to crime one with another, they display a lower rate of fluctuation than deaths from disease, the two orders of facts being compared in nearly equal numbers, so as to eliminate the fallacy attaching to the use of unequal aggregates of facts. It is also worthy of remark, that the rate of fluctuation for the facts relating to crime is still inferior to the rate of fluctuation for deaths from diseases belonging to the Zymotic class. The highest rate for crime, (22.44 in malicious offences against property) is less than the average for Zymotic diseases (26.27), and, therefore, considerably below the rate for several members of that class.

The smallness of the annual fluctuation in the numbers of crimes, as compared to the fluctuation in the numbers of deaths, is not now stated for the first time; for Mr. Samuel Brown, in a valuable Paper "On the Uniform Action of the Human Will, as exhibited by its Mean Results in Social Statistics," (Assurance Magazine, vol. ii., p. 320,) says, "that from the slightest tendency to crime to the most depraved inclination of the human heart, certain laws may be deduced by which, in a large population, their recurrence may be predicted with greater certainty than the laws of disease and death."

Such being the result of a comparison of deaths by disease with crimes and the leading facts relating to them, I now come to consider the third subject embraced in the title of this paper, namely, the fluctuations prevailing in other events within and beyond the control of the human will.

Now, it is obvious that the numerical facts relating to matters altogether beyond the control of the human will are very few in number. The voluntary antecedent of marriage influences the number of births; the habits of life in which men indulge bear their part in determining the number of deaths. With the exception perhaps of the weather, and of those phenomena of the external world which admit of being expressed in the simple language of figures, there is no order of facts embodied in our numerous and multifarious numerical returns, from which the operation of the human will is wholly excluded. It will be necessary, therefore, to make choice of the weather, as affording data for determining the rate of fluctuation of events brought about by causes wholly beyond the control of the human will, and to compare some of the constituent elements of that proverbially fickle and variable thing with disease on the one hand, and crime on the other. Such a comparison can only

be made by treating fractional parts of a degree of temperature, or of an inch of rain, as equivalent to units of disease or crime. If the propriety of this procedure is admitted, we shall be in a condition to compare disease on which the human will has little direct influence; and crime, in which the human will is of paramount importance, with the weather, from which the operation of the human will is altogether excluded. This comparison is made in the following table:—

TABLE X.—*The Weather compared with Disease and Crime.*

The Weather.	Number of Units.	Fluctuation.	Disease.	Number of Deaths.	Fluctuation.	Crime, &c.	Number of Crimes.	Fluctuation.
Mean Annual Temperature of the Air in 10ths of degrees (15 years)	492	2·38	Apoplexy	524	7·06	Acquitted	722	9·92
Annual Rain Fall in 10ths of inches (15 years)	242	28·51	{ Diseases of the Liver }	241	9·83	{ Bills not found or not prosecuted }	283	12·82
Horizontal movement of the Air in miles (7 years)	742	14·49	{ Water on the Brain }	642	6·26	Acquitted	711	9·28

The small number of facts at my command has prevented me from comparing equal, or nearly equal, numbers of units with each other; but I have made use of the numbers most closely approximating to an equality.

The inferences to be drawn from the figures in this table are:—1. That of the three elements which make up what is commonly called the weather, the temperature exhibits the least, and the rainfall the greatest, amount of annual fluctuation; the wind occupying an intermediate position. 2. That the annual fluctuation in the case of the temperature of the air, falls short of the annual fluctuation in the diseases, and in the issue of cases taken into custody, which happen to be selected for comparison. 3. That the highest fluctuation, namely that in the fall of rain, though considerable, still falls short of the fluctuation which obtains in the case of the leading Zymotic maladies.

The events, other than those already examined, which may be said to be within the control of the human will, constitute the bulk of the numerical returns that form the staple of our blue books, with the single exception of returns relating to deaths, and the causes of death; though the human will, as already stated, is not wholly excluded even from the causation of this latter order of facts.

The events which have now to be examined, may be said to represent the operation of the human will in every possible degree of

intensity, and in every possible combination of motive. Every single event, without exception, represents the ultimate effect of a long succession of antecedents; of an active, though unconscious, co-operation of a vast number of voluntary agents, making use of the powers and products of nature, which are themselves subject to the utmost variety, in respect of intensity and abundance.

The price of provisions, for example, may be said to be the ultimate result of the joint operation, simultaneous or successive, of an unusually large number of causes:—of the demand as determined by the paying power of the community; of the more or less abundant supply as influenced by the industry, capital, and skill of the producer; the enterprise of the merchant; the cost of freight; the facilities of transport by land and sea; the state of peace or war; the more or less favourable nature of the seasons at home and abroad; fiscal facilities or impediments; and the abundance or scarcity of other articles of diet. In like manner, the prices of stocks and shares; the produce of mines and collieries; the value of exports and imports; the number and tonnage of vessels; the number of emigrants; the consumption of commodities;—all are aggregate results of an almost infinite series of combinations and permutations of human wants creating a demand, of human industry and enterprise affording a corresponding supply. Not less numerous are the causes which conspire to determine the annual number of bankruptcies; of fires and alarms of fires; of students in search of education; of paupers seeking relief at the cost of the state; of proposals for life-assurance; of persons tempted to the commission of suicide; of letters distributed by the post-office. It may not be easy in every case to sum up all the moral and physical forces which combine to bring about each individual event in the aggregate of events, or to render a reasonable account of the rate of fluctuation which belongs to each collection of facts; but it is easy to see that every order of facts contained in the several tables of this Essay is marked by the common property of being dependent upon the combined operation of a great number of causes bearing on each individual event with a very variable intensity. This is the peculiar feature which marks all the facts with which the Statist has to deal, so that his science may be said to be the science which takes cognizance of all that large class of facts and events which, resulting from the combined operation of a great number of causes, express themselves in the language of numbers.

As I have mentioned particularly the price of provisions, I will begin by making this the subject of comparison with disease and crime, similar to the comparison instituted in the last table for the leading constituent elements of the weather. I select, as sufficient for my purpose, the prices of the three cereals—wheat, barley, and oats—expressed in pence, for each of the fifteen years, 1840 to 1854 inclusive.

TABLE XI.
Prices of Cereals compared with Disease and Crime.

Nature of Crime, &c.	Number of Crimes.	Fluctuation.	Species of Grain.	Average Number of Pence.	Fluctuation.	Causes of Death.	Number of Deaths.	Fluctuation.
Miscellaneous	788	17.77	Wheat	643	12.70	Miscellaneous	575	41.74
Forgery, and offences against the currency (England)	794	8.25				Diarrhoea	747	29.45
						Dropsy	588	12.41
						Diseases of the Heart, &c.	715	8.02
						Violence, Privation, &c.	769	6.89
						Water on the Brain	767	6.00
Offences against the person (London)	301	13.61	Barley	379	14.23	Small Pox	399	69.92
						Teething	325	12.48
						Inflammation of the Stomach and Bowels	316	8.86
						Cancer	349	6.60
						Sudden	292	17.46
						Diseases of the Lungs (residue)	282	10.99
						Diseases of the Liver	241	9.83
Malicious offences against property (England)	251	22.44	Oats	257	19.50	Puerperal Diseases, &c.	280	9.30
						Diseases of the Kidneys	231	7.80
						Inflammation of the Brain	280	5.00
						Diseases of the Brain and Nerves (residue)	264	4.16

With so many variable causes co-operating to bring about one result, it can excite no surprise that the price of food should fluctuate from year to year, to the extent indicated in the table; that it should present the same sort of fluctuation as the crimes with which it is compared; and that it should exceed in amount the fluctuation in the numbers of deaths from most diseases. But it is worthy of remark, that large as is this fluctuation, it still falls short of that which obtains in the case of diseases of the Zymotic class. It is such a fluctuation as occurs in the more variable elements of the weather; it is such as takes place in the diseases most affected by atmospheric influences; it exceeds the rate of fluctuation in events brought about exclusively, or chiefly, by the operation of the human will; but it falls greatly short of that high rate of fluctuation which results from the operation of the causes, whatever they may be, which give rise to epidemic maladies.

The series of comparisons which I am now instituting would be incomplete, if I did not add to the weather and the prices of commodities, the prices of the funds and principal stocks; for there is no order of facts which acknowledges as its cause, a more variable combination of moral forces. I use, for the purpose of comparison, the highest and lowest prices of Consols, and of Bank and of India Stock, expressed in eighths of a pound, for the 7 years 1848-54, comparing them, as in the previous tables, with as many deaths from disease, and as many crimes or disposals of criminals, as there are units of money.

TABLE XII.—*Prices of Stocks compared with Disease and Crime.*

CRIME.	Number of Crimes.	Fluctuation.	STOCKS.				DISEASE.	Number of Deaths.	Fluctuation.
Forgery and offences against the currency (England)	794	8.25	{ Consols, highest 781 2.92 " lowest 723 4.93 }				{ Water on the Brain }	767	6.00
Offences against property with violence (England)	1,966	5.44	{ India stock, highest 2,115 5.92 " lowest 1,945 5.75 }				{ Inflammation of the Lungs }	1,740	10.92
Offences against the person (England)	2,053	9.54	{ Bank stock, highest 1,739 3.68 " lowest 1,622 3.66 }				Bronchitis.....	1,619	13.22

This table places, in a very striking light, the steadiness of the funds and leading stocks, when compared with disease and crime. The rates of fluctuation for Consols and for India and Bank Stock are comprised between the low figures 2.92 and 5.92—figures lower,

with one exception, than the rates of fluctuation brought into comparison with them.

It now only remains for me to complete this inquiry, in accordance with the title of the paper, by bringing together into a single tabular view the miscellaneous facts which I have collected, in further illustration of the rate of fluctuation in events brought about by the combined operation of a great variety of causes.

TABLE XIII.

Miscellaneous Events and Facts.

	Number of Events or Facts.	Fluctuation.
1. Bankruptcies (15 years)	1,609	18.64
2. " (7 ")	1,505	24.54
3. Emigrants from the United Kingdom (7 yrs.)	312,361	10.84
4. Fires in London (7 years)	888	3.83
5. Fires and alarms of fire (7 years)	1,072	5.00
6. Students at King's College (exclusive of evening classes (7 years, 1851-57)	1,025	7.13
7. Students registered at College of Surgeons (7 years, 1851-57)	1,073	1.85
8. Sailing-vessels employed in the Home and Foreign Trade (6 years, 1849-54)	17,440	2.21
9. Ditto, tonnage	3,246,782	3.26
10. Ditto, men	144,331	6.25
11. Steam-vessels employed in same way for same period (exclusive of river steamers)	514	12.70
12. Ditto, tonnage	158,976	15.45
13. Ditto, men	12,416	17.23
14. Sailing and steam-vessels (total of foregoing)	17,955	2.42
15. Ditto, tonnage	3,405,759	3.73
16. Ditto, men	156,747	6.55
17. Sailing-vessels built and registered in the United Kingdom (7 years, 1848-54)	641	5.38
18. Ditto, tonnage	126,155	9.73
19. Steam-vessels	108	23.45
20. Ditto, tonnage	29,764	27.19
21. Sailing and steam-vessels (total of foregoing) Ditto, tonnage	750	6.78
22. Declared value of articles exported from ports in the United Kingdom (1848-54)	1,409,414	12.31
Coals and culm		
23. " " Cotton manufactures ..	22,321,161	7.68
24. " " Hardware and cutlery ..	2,822,165	13.46
25. " " Woollen manufactures ..	8,295,193	11.68
26. " " Machinery	1,270,974	19.10
27. Articles (paying duty) retained for home consumption in the United Kingdom (1848-54) Coffee (lbs.)	34,922,900	5.77
28. " " Raw sugar (cwts.)	6,653,354	6.16
29. " " Tea (lbs.)	54,196,841	4.06
30. " " Tobacco, manufactured (lbs.) ..	28,168,964	1.89
31. " " Wine (galls.)	6,434,481	2.66
32. Produce of British mines (1848-54) Tin (tons) ..	6,349	5.25
33. Sales from Cornish copper mines (Tons of ore) ..	161,690	5.07

TABLE XIII.—Continued.

	Number of Events or Facts.	Fluctuation.
34. Paupers (exclusive of vagrants) in receipt of relief Jan. 1 (1849-54) (In-door)	112,129	4.40
35. Ditto (Out-door)	749,110	3.45
36. Ditto (Total)	861,239	3.60
37. British vessels entered in ballast (1848-54) (tons)	4,921,869	3.43
38. Ditto cleared	4,966,996	2.46
39. Foreign vessels entered in ballast	2,851,035	6.77
40. Ditto cleared	3,115,245	9.32
41. British and foreign (total of foregoing) entered (tons)	7,772,905	5.20
42. Ditto cleared	8,082,241	3.56
43. Vessels wrecked per 1,000 registered (1844-51, except 1846)	232	10.34
44. Suicides in London (5 years 1846-51) men	164	7.93
45. " " " women	78	9.25
46. Letters by London District Post (1848-54) estimate	39,502,576	5.43
47. " " England and Wales estimate	297,743,483	5.48
48. Proposals to Eagle Insurance Company (1848-54)	307	8.52
49. Ditto, completed	251	6.44

To the miscellaneous collection of facts comprised in this table, the same observations apply as to the facts relating to mortality and crime. There are examples of a high, as well as of a low, rate of fluctuation; the very highest (namely, the tonnage of steam vessels built and registered in the United Kingdom—27.19) falling short of the rate of fluctuation in the leading Zymotic maladies; the lowest (namely, the number of students registered at the College of Surgeons in the class of anatomy, and the number of pounds of manufactured tobacco entered for home consumption—1.85 and 1.89, respectively) falling even lower than the low fluctuation of births in London.

The higher rates of fluctuation in this table cannot fail to attract attention, as belonging to things in a state of rapid increase from year to year. Thus, the tonnage of steam-vessels built and registered in the United Kingdom, presents an average rate of fluctuation 27.19. and the number of such vessels a rate of 23.45. So also with steam vessels employed in the home and foreign trade; there is a fluctuation of 17.23 in the men by whom they are manned, of 15.45 in the tonnage of the vessels, and of 12.70 in the number of the vessels. Another high rate of fluctuation (19.10) is observed to belong (partly for the same reason) to the exports of machinery. On the other hand, the rate of fluctuation is moderate, or even of very small amount, in the case of sailing vessels, and of the aggregate of sailing vessels and steamers.

The lower rates of fluctuation, too, are deserving of notice, from the near approach to equality of the rates of fluctuation of facts of a totally different order. But to this subject I shall have to refer again, presently.

With the exception of the cases of high rates of fluctuation just referred to, the events which exhibit the highest rate are bankruptcies. For the seven years, 1848-54, they fluctuate as the numbers 24·54—numbers in excess of the rate (21·84) for forgeries and offences against the currency, in London, in the same seven years.

I have now, by the aid of a larger and more varied assortment of facts than has hitherto been employed for the purpose, and making use of the deaths from various causes (on account of their being almost independent of human volition) as a starting point and standard of comparison, brought under the notice of the society a subject of great interest and of some practical utility. The numerical method, or the science of large numbers, treats of no topic more interesting than this. No one who has to deal with large numbers of facts, or to make up periodical returns of figures, can fail to be struck with the remarkable recurrence, year by year, of aggregates of similar amount, whether the figures relate to births, deaths, and marriages, to crimes and the sentences of criminals, to the weather, to the prices of stocks, to the production, consumption, and price of food or manufactures, to the number of vessels employed in the work of import and export, to the numbers of fires and wrecks, of paupers and bankrupts, or to the number of qualified persons who year by year recruit the ranks of the learned professions. In every considerable collection of facts there are to be found many examples of a degree of steadiness and freedom from fluctuation which could not have been anticipated, and which experience alone could have taught us to look for. Those writers, too, who have treated of these fluctuations as phenomena belonging to the logic of large numbers, have always spoken of them with surprise and admiration, sometimes even with a feeling approaching to awe. Quetelet, for instance, speaks of the striking resemblance between the numerical expression given to events brought about by the human will, and by physical forces over which man has no control, as afflicting. "It must be confessed," he says, "that distressing as the truth at first appears, if we submit to a well followed out series of observations, the physical world and the social system, it would be difficult to decide in respect to which of the two the acting causes produce their effects with most regularity."* This distinguished statist, by speaking of this coincidence as distressing at the first view of it, means perhaps to have it understood that a more careful considera-

* *Sur l'Homme, et le Développement de ses Facultés.* Par M. A. Quetelet. *Conclusions*, book iii., chapter 3.

tion divests the facts of the painful aspect which they wear at first sight; but as this is rather inferred than distinctly expressed, it may be well to enquire whether there is, or is not, any good and sufficient ground for regarding these curious coincidences with suspicion.

Now it is quite clear that the origin of any painful feeling to which the coincidences in question may give rise is to be traced to a misgiving, lest the human will, instead of continuing to be looked upon as an independent movement of the mind, swayed by reason and conscience, should come to be regarded as on a par with such unconscious forces as the winds and waves, the weather and the seasons, the causes of shipwrecks and of deaths. Under the influence of this misgiving the mind seems to be drifting towards fatalism, and can only save itself by a strong effort of reason. The reality of the coincidences which have given rise to the misgiving is admitted; how then is the difficulty to be explained away?

In the first place, it must be evident, on the most superficial consideration of the facts, that the recurrence, year by year, of the same or similar numerical values, as the ultimate result of the simultaneous or successive operation of a number of forces, does not enable us even to guess at the nature or degree of those forces. The very same figures may result, now from physical, now from moral causes; at one time from forces of great intensity, at another from forces of the most trivial character. As illustrations of equal amounts of fluctuation from totally dissimilar causes, take the deaths in the West District of London in seven years, (fluctuation 13·66) and offences against the person (fluctuation 13·61), or deaths from apoplexy (fluctuation 5·54), and offences against property without violence (fluctuation 5·48), or students registered at the College of Surgeons (fluctuation 1·85), and the number of pounds of manufactured tobacco taken for home consumption (fluctuation 1·89), or out-door paupers (fluctuation 3·45), and tonnage of British vessels entered in ballast (fluctuation 3·43): and as illustrations of nearly equal numerical results brought about by moral forces of some intensity, and of physical forces of the most trivial order, take the experiments detailed in a paper read before the Institute of Actuaries, and published in the fifth volume of their transactions, p. 315. As this paper may not have fallen under the notice of the Members of this Society, I may briefly state that the experiments consisted in substituting for men and women, or for consumptive and non-consumptive patients, presenting themselves in the out-patient department of King's College Hospital, in groups of 25 and 50, an equal aggregate, in the ascertained proportions of men to women, and of the one class of patients to the other, of black and white peas drawn out of a bag in numbers equal to the groups in question. Between the attendances determined, as they must have been, by a

great variety of motives, and the drawings effected by variable combinations of very trivial forces, there were several remarkable coincidences. The figures were nearly the same, but the forces wholly different in degree and in kind. If these concurrent forces, so contrasted in character and so different in intensity, may find their ultimate expression in precisely the same figures, what ground can there be for inferring from equality of numbers identity of character? And yet such an inference as this must have lain at the root of Quetelet's misgivings. Had he entered deeper into the subject, and accumulated a greater number and greater variety of instances, he must have been completely re-assured, and he would either not have given expression to his mistrust, or he would have shown his readers how he had contrived to divest himself of that painful feeling in his own case.

The fact is, that all analogy sets itself against the attempt to infer the nature of a cause from the figures which measure its intensity. We continue to be as ignorant of the essential nature of gravity, as we were before Newton clothed its phenomena in a garb of figures; we remain without any real knowledge of the essence of light, though we know to a mile the rate at which it travels; and we are as far off from grasping the nature of the electric fluid as we were before Wheatstone so ingeniously contrived to measure its velocity. And if the real nature and essence of these powers of nature are not to be learnt from any numerical expression of their phenomena, however exact, what hope is there that we shall be more successful in inferring the real nature of the human will from the figures that express the aggregate results of its operation; and what fear lest the foundations of morals and religion should be shaken by numerical coincidences between these results and others, in the bringing about of which human volition has had no share.

These observations will not be deemed unnecessary, or out of place, by those who are aware of the extensive prevalence of misconceptions as to the tendency of statistical enquiries. It must be the anxious wish of every Member of this Society to represent its objects in their true light; and I am sure that I do not misconstrue them when I say that, in aiming at the discovery of truths of the highest order, and of facts admitting of the most beneficent applications, we are not conscious of the presumption of expecting, or of the perverse folly of desiring, to solve the mysteries of the human will, or to draw aside one corner of the thick veil which hides from mortal eyes the intimate nature and essence of the forces, physical and moral, which, in obedience to a higher power, maintain order in the universe, support the life of man, prolong the existence of society, and increase the wealth, extend the empire, and uphold the power, of favoured nations.

As the foregoing Paper is of considerable extent, and embraces a variety of subjects, I have deemed it desirable to present a brief summary of the conclusions which may be drawn from it under the distinct heads of A.—General Principles relating to Annual Fluctuations in Events brought about by the combined operation of a great number of Causes. B.—The rate of Fluctuation in Disease. C.—The rate of Fluctuation in Crime. D.—The rate of Fluctuation in Miscellaneous Events. E.—The inferences to be drawn from the foregoing inquiries respecting the Causes of the Events which exhibit these Annual Fluctuations.

A.—General Principles.

1. That the fluctuations which occur from year to year in events brought about by the combined action of a variety of causes, are not fortuitous.

2. That the amount of fluctuation from year to year, in a given series of numerical returns, decreases as the number of facts constituting the series increases.

3. That the fluctuations in the class of events brought about by the human will may be less considerable than in those resulting from the operation of causes over which the will has no control.

4. That some of the higher rates of fluctuation may be accounted for by the small number of facts; others by changes in the nomenclature of the facts themselves; and others, again, by the figures relating to events in course of rapid development, (*e.g.*, steam-vessels, when their value was fully established; machinery, when export of same was permitted; letters sent by post, after the introduction of the new system).

B.—Rate of Fluctuation in Disease.

1. That the highest rate of fluctuation belongs to diseases of the Zymotic class; an intermediate rate to diseases of the Organs of Respiration; and the lowest rate to other local diseases, including those which consist of structural degeneracy of the textures of the body; and a low rate of fluctuation to that class of deaths in which human volition plays a principal part.

2. That the rate of fluctuation in the class of Zymotic diseases not only exceeds the rate of fluctuation in all other classes of disease, but also that which prevails in any other order of facts whatever.

C.—Rate of Fluctuation in Crime.

1. That the rate of fluctuation in crime is, on the whole, less considerable than the rate of fluctuation in disease; and that it is much less considerable than that which prevails in the case of Zymotic maladies.

2. That the moderate rate of fluctuation in crime finds a parallel in the moderate rate which prevails in the case of a great variety of numerical returns.

D.—Rate of Fluctuation in Miscellaneous Events.

1. That the rate of fluctuation in events other than disease and crime is subject to great variety; the higher rates of fluctuation belonging, for the most part, to events in course of rapid development.

E.—General Inference.

That the rate of fluctuation prevailing in any particular event, or class of events, throws no light whatever on the nature of the causes which may have brought about the event, or class of events, in question; and that, consequently, no inference can be fairly drawn from the comparative steadiness in the figures representing the numbers of crimes as to the nature of the human will, or as to the other causes which have contributed to occasion them.

APPENDIX.

The question raised in the text,—whether the rate of fluctuation in the same order of facts diminishes as the facts increase?—was put to the test by means of a very simple order of facts, namely, the attendances of physicians' patients in the out-patient department of King's College Hospital. The number of men attending in 10 distinct groups of 100, 200, &c., up to 1,000, was carefully abstracted, the average number reduced to the scale of 1,000, and the mean fluctuation calculated for each series, with the following results:—

Men in Attendance.	Number of Men per 1,000 Attendances.	Rate of Fluctuation.
100	412	12.50
200	409	8.69
300	410	9.35
400	405	10.40
500	403	7.55
600	406	7.44
700	405	3.73
800	406	5.82
900	397	7.78
1,000	398	5.03

It will be seen that the rate of fluctuation has a tendency to diminish as the facts increase, but that the decrease is itself subject to fluctuation.

On the Ages of the Population in Liverpool and Manchester.

By J. T. DANSON, Esq., *Barrister-at-Law.*

[Read before Section F, (Economic Science and Statistics,) of the British Association for the Advancement of Science, at Dublin, Thursday, 27th August, 1857.]

WE are accustomed to allot the periods of human life proper to growth, maturity, and decay, by reference to Age. The test is vague and uncertain for individuals, but sufficient for large numbers.

With an account before us of the ages of a million of persons we can, with a fair degree of certainty, divide them into Two Groups, the first of which shall indicate the number fitted to take part in ruling, protecting and providing for the rest; and the second, the number of those dependent on them for these services. Intelligence, activity, and discretion are often found combined in men under 25 years of age; and often, too, these qualities remain unimpaired in men over 55 years of age. But many, also, are found deficient in these qualities between the ages of 25 and 55. And if we select from any large number of persons all the Males over 25 and under 55 years of age, it is certain that we shall thus obtain a numerical expression of its power, for all the more important purposes for which society exists, at once simple in form and sufficiently accurate to be worthy of attentive consideration.

But before doing this for Liverpool and Manchester, it may be as well to say a few words on the relative numbers of the sexes.

The population of England and Wales in 1851 consisted of—males, 8,781,225; females, 9,146,384; showing an excess of about 360,000 females.

The ages of persons, of both sexes, were then obtained and published for every period of five years, from birth to 100 years and upwards. In the first three quinquennial periods, or up to 15 years of age, the males are in excess. After 15 years of age the scale is turned; and in every subsequent quinquennial period, down to the close, the females are in excess.

Descending to the North-Western Division of the kingdom (composed of Lancashire and Cheshire) we find the females in excess, though slightly, up to 5 years of age. Then the males are very slightly in excess up to 15; and afterwards the excess is uniformly on the female side, to the end of life.

In Manchester (and under this term I include the city of Manchester and the borough of Salford)—in Manchester, there was a very slight excess of males between 5 and 10 years of age. In every other quinquennial period there was an excess of females.

In Liverpool (by which I mean the borough of Liverpool, as

defined for municipal purposes) the distribution was nearly the same as for England and Wales at large, with one exception. The males were found to be in excess up to 15 years of age. Then the females were in excess in every quinquennial period, with one exception: that from 40 to 45 years of age. At this period there was a material, but not large, excess of males.

The precise figures on which these statements are based, will be found in the tables appended to this paper; and they lead to one general conclusion: that the excess of females, common to the whole population, is somewhat more equally distributed through the different ages, in Lancashire and Cheshire, than in the rest of England and Wales.

It has been said that the Total Population of England and Wales, in 1851, was 17,927,809; of which were—

Females of all ages	9,146,384
Males under 25	4,859,667
„ over 55	858,447
	<hr/>
	14,864,498
Males, 25 to 55	3,063,111

So that there were, on an average, throughout the kingdom, *to every hundred Males*, of what, for the sake of distinction, I will term the *productive age*.

Females	298
Males, immature	158
„ aged	28
	<hr/>
Total.....	484

For the North-Western Division of the Kingdom, the like proportions were—to every hundred Males of the productive age

Females	289
Males, immature	155
„ aged	20
	<hr/>
Total.....	464

For Manchester—

Females	285
Males, immature	145
„ aged	15
	<hr/>
	445

For Liverpool—

Females	263
Males, immature	133
„ aged	13
	<hr/>
	409

The figures in detail will be found in the appended tables.

Here we find a rapidly descending ratio of the (so-called) non-productive part of the population; and that in each of the three groups of which it is composed. The average of the North-Western Division is less than that of the United Kingdom—that of Manchester still less—and that of Liverpool least of all.

And it is, to say the least, extremely probable that, could we ascertain the number of English persons *abroad* at the date of the census of 1851, we should find the proportion of males, from 25 to 55 amongst them, greatly in excess of the average ratio prevalent at home; and should also, on further inquiry, find that the population of the North-Western District, and that of Liverpool and Manchester in particular, contained more than an average proportion of the women, children, and young and aged men, *properly dependent upon this excess* of the productive English males abroad.

Whence it may be inferred that the excess of Males at the productive age made apparent in these figures, as existing in the particular localities referred to, is rather a defective than an excessive expression of the fact.

But the division of age and sex here suggested, is too broad and simple to escape objection, if relied upon as indicating the due proportion of the productive to the non-productive sections of the population.

Let us, then, take the number of Children, or young persons, of both sexes, under 15 years of age. These will be found to have borne, in 1851, *to every hundred Males between 25 and 55*, the following proportions:—

In England and Wales.....	207 children.
„ the North-Western Division	201 „
„ Manchester	183 „
„ Liverpool.....	171 „

Again, take the proportionate number of Females at the age at which the difference of sex exercises the most powerful influence, and when women may be most justly assumed to be productive. The Women from 15 to 40 years of age, to every hundred males from 25 to 55, were

In England and Wales	122·1 women.
„ the North-Western Division	126·4 „
„ Manchester	132·1 „
„ Liverpool	123·5 „

Here we may reasonably infer that factory labour for Women, acting on the tendency to migrate in search of employment, raised the proportion for the North-Western Division, and notably for Manchester; leaving Liverpool with an average but little removed from

that of the entire kingdom. And this inference is in some degree confirmed by dividing this female group, 15 to 40, into two sections 15 to 25 and 25 to 40.

In the younger of these two groups, the demand may be supposed to have reference rather to factory employment, and in the elder to considerations more purely sexual.

We find, then, that the number of females from 15 to 25 years of age, to every hundred Males from 25 to 55, was

In England and Wales	57·3 females.
„ the North-Western Division	59·9 „
„ Manchester.....	61·5 „
„ Liverpool	55·4 „

Here Liverpool shows a smaller ratio than that of the entire Kingdom.

The corresponding numbers of females from 25 to 40 years of age, were

In England and Wales	64·8 females.
„ the North-Western Division	66·5 „
„ Manchester.....	70·6 „
„ Liverpool	68 „

Here Liverpool is in excess of the kingdom, and even of the North-Western Division, in the proportion of such females allotted to males, of what I have termed the productive age.

It has been observed that the males under 25 years of age, and thence classed as “immature,” are deficient in Liverpool and Manchester. Dividing the group into sections, we have the following result:—

Males.	To every Hundred Males, 25—55.			
	England and Wales.	North-Western Division.	Manchester.	Liverpool.
0—15	104·1	100·5	91·3	86·
15—25	54·4	54·9	53·5	47·6

There is a somewhat similar deficiency in Liverpool and Manchester of the group of males over 55, and thence marked “aged.” If we add to the justice of the term, by confining it to males over 65 years of age, we find the proportions to be as under:—

Males.	To every Hundred Males, 25—55.			
	England and Wales.	North-Western Division.	Manchester.	Liverpool.
Over 65 years of age	12.2	8.2	5.3	4.4

That the *productive and defensive power* of a given population is dependent, in a great measure, upon the ages of the individuals composing it, will probably not be disputed, and is now tolerably well understood. But this admitted, we can hardly refuse to admit something more. The *character and conduct* of the population, and that not only individually but collectively, may be reasonably supposed to be similarly affected.

It has already been shown that sanitary improvements, by lengthening the duration of life, tend directly to increase the proportion of mature and aged persons to the whole of the population on which they take effect. This must needs prolong the effects of experience upon such a population; and when taken together with the prestige commonly conferred upon opinions by the ages of those who utter them, may be expected to give a corresponding influence to reason, as opposed to passion, in the affairs of a population so placed.

The high and increasing value of life in England, indicates a large and increasing proportion of matured minds; and undoubtedly has a corresponding influence on the exercise of the national will, as well at home as abroad—an influence already traceable in our political history.

There is no apparent reason why municipal action should not be influenced by the same causes; and hence it is that I have deemed the figures, touching the ages of the population of Liverpool and Manchester, here laid before the section, worthy of the labour necessary to place them there.

Eldon Chambers, Liverpool,
23rd August, 1857.

TABLE I.
Ages in the Larger Areas.

1851.	England and Wales.		North-Western Division.		To 10,000 Males aged 25—55.			
					England and Wales.		North-Western Division.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Total Populn.	8,781,225	9,146,384	1,215,832	1,274,995	28,668	29,860	27,629	28,973
0—25....	4,859,667	4,917,952	684,452	705,784	15,865	16,055	15,554	16,039
25—55...	3,063,111	3,248,458	440,058	464,953	10,000	10,605	10,000	10,566
55 and upwards }	858,447	979,974	91,322	104,258	2,803	3,199	2,075	2,369
0— 5	1,176,753	1,171,354	165,671	165,827	3,842	3,824	3,765	3,768
5— 10	1,050,228	1,042,131	142,747	142,655	3,429	3,402	3,244	3,242
10— 15	963,995	949,362	134,111	133,628	3,147	3,099	3,048	3,037
15— 20	873,236	883,953	124,128	130,230	2,851	2,886	2,821	2,959
20— 25	795,455	871,152	117,795	133,444	2,597	2,844	2,677	3,032
25— 30	699,345	771,130	105,244	116,350	2,283	2,517	2,392.	2,644
30— 35	617,889	658,237	91,082	97,547	2,017	2,149	2,070	2,217
35— 40	532,680	555,879	76,227	78,909	1,739	1,815	1,732	1,793
40— 45	474,211	494,408	68,653	71,023	1,548	1,614	1,560	1,614
45— 50	392,882	406,107	53,709	55,135	1,283	1,326	1,220	1,253
50— 55	346,104	362,697	45,143	45,989	1,130	1,184	1,026	1,045
55— 60	254,892	271,395	29,482	31,807	832	886	670	723
60— 65	227,240	254,070	25,406	28,856	742	829	577	656
65— 70	151,640	175,879	15,903	18,732	495	574	361	426
70— 75	114,730	135,432	11,362	13,140	375	442	258	299
75— 80	65,016	81,086	5,741	7,082	212	265	130	161
80— 85	31,690	42,150	2,461	3,275	103	138	56	74
85— 90	10,423	14,982	772	1,031	34	49	18	23
90— 95	2,282	3,969	151	268	7	13	3	6
95—100	456	874	37	54	1	3	1	1
100 and upwards }	78	137	7	13	....	....	....	....

TABLE II.
Ages in Manchester and Liverpool.

1851.	Manchester City and Salford Borough.		Liverpool Borough.		To 10,000 Males aged 25—55.			
	Males.	Females.	Males.	Females.	Manchester and Salford.		Liverpool.	
Total Populn.	191,457	209,864	182,058	193,897	26,054	28,558	24,707	26,313
0—25 ...	106,518	113,002	98,559	103,630	14,495	15,377	13,375	14,063
25—55 ...	73,488	82,092	73,688	77,259	10,000	11,171	10,000	10,485
55 and upwards }	11,451	14,770	9,811	13,008	1,558	2,010	1,331	1,765
0— 5	25,705	26,031	23,976	23,938	3,498	3,542	3,254	3,249
5— 10	21,478	21,318	20,498	20,118	2,923	2,901	2,782	2,730
10— 15	19,974	20,449	18,950	18,761	2,718	2,783	2,572	2,538
15— 20	19,394	21,245	17,226	18,781	2,639	2,891	2,338	2,549
20— 25	19,967	23,959	17,909	22,092	2,717	3,260	2,430	2,998
25— 30	17,952	20,641	17,137	19,356	2,443	2,809	2,326	2,627
30— 35	15,269	17,452	16,373	17,312	2,078	2,375	2,222	2,349
35— 40	12,573	13,818	13,024	13,501	1,711	1,880	1,767	1,832
40— 45	11,755	12,787	12,103	11,893	1,600	1,740	1,643	1,614
45— 50	8,692	9,460	8,118	8,135	1,183	1,287	1,102	1,104
50— 55	7,247	7,934	6,931	7,062	986	1,080	941	958
55— 60	4,089	4,727	3,569	4,019	557	643	484	545
60— 65	3,403	4,349	3,012	3,957	463	592	409	537
65— 70	1,822	2,478	1,509	2,179	248	337	205	296
70— 75	1,239	1,801	1,021	1,544	169	245	139	210
75— 80	560	862	455	775	76	117	62	105
80— 85	236	403	164	380	32	55	22	52
85— 90	79	113	64	100	11	15	9	14
90— 95	15	23	12	38	2	3	2	5
95—100	5	12	4	10	1	2	1	1
100 and upwards }	3	2	1	6	....	....	....	1

The Apprenticeship System, in reference to the Freedom of Labour.

By JAMES ROBERT NAPIER.

[Read before Section F, Economic Science and Statistics, of the British Association for the Advancement of Science, at Dublin, on Tuesday, 1st September, 1858.]

IN many public works it is the custom before young men can be employed, that an apprenticeship must be served; in others an agreement is made for five or more years that the employed shall receive, in exchange for services to be performed, wages at the rate of so much per week for the first year, so much per week for the second year, so much for the third, &c., to the end of the agreement, the amount being greater each year. And where an employer has some hundreds, or it may be thousands of workers, the rate each year is generally the same for all who have commenced at the same time. The object which I believe the employer of the present day has in adopting the Apprenticeship System, or the system of long engagements, at low rates of wages, is, that he may legally have the power of preventing those who have been a year or two at the business from running away and selling their services at a higher rate to another employer, who has not had the trouble and expense of their inexperienced years; and secondly, the employer expects that by this means he gets cheaper labour, and the public expect that they get better work.

It is my object now, in bringing this subject before you, to show, or to try to show—first, that this Apprenticeship System—this system of paying all alike who have entered at the same time—is in most cases unnecessary; second, that it is very doubtful if the second of the employer's objects for adopting it be fulfilled—viz., the cheapness; third, that it is bad for the employed; fourth, hurtful to society at large; and, fifth, that the objects aimed at would all be obtained by a system the very reverse of apprenticeships and long engagements, viz., by having no apprenticeships and no engagements whatever, the employer paying his workers just what their services are worth at the time.

If he did so, he (the Employer) could never lose by any of them leaving; but the person who employed this runaway worker would be the loser if he gave more wages for the same quantity and quality of work. If the apprentice or engaged hand were receiving the full value of his services, the chances are he would not receive more than that from any one else, therefore he would have no inducement to run away; therefore, on that account, the Apprenticeship System is unnecessary. If the employed spoiled his work he must, according to this system, pay the employer. If he or his parents are unable to pay for the spoiled work, as is often the case, and must besides

have money to supply his daily wants, then the Apprenticeship System is brought into action. He makes an agreement with his employer to be paid at a lower rate of wages for a number of years, in order to repay his employer for those first years, when he both spoiled work and received money. This period, however, is prolonged by the employer beyond all reason to five, and in some cases to seven years. The agreement, if any, ought to be in force no longer than the period when the increased value of the services of the employed have repaid the employer for the work spoiled, for the extra wages received at its commencement, and it may be for his share of the wages of a foreman, whose sole duty it may be to superintend and direct a number of workers.

I believe, however, that no engagement whatever is necessary. A worker who has to pay once for what he spoils will never spoil a second piece of work; he will either leave a business that he finds he is not fitted for, and that he has to pay so dearly for learning, or he will take care and think of what he is about, and thereby become a first-rate worker. The effect upon the worker of long engagements at constant annual wages, the same for all of the same year, without regard to their individual ability, is, that in general those who have the ability, do not perform more work than their neighbours who have not the ability. They could do more work—they could be more profitable to their employer, but they won't—they derive no immediate benefit from working harder; therefore they don't. They become lazy, indifferent, and, no doubt, often acquire injurious habits at this period of their lives, which may become permanent, and which are always difficult to reform. The system is, therefore, bad for the Employed.

The effect of the system upon the Employer is, that in consequence of the worker not doing so much as he might, could, and would do, were he paid according to the Quantity and Quality of the work executed, more hands must be employed, and more money expended in providing them with tools and accommodation; and, therefore, I think it very improbable that work executed by apprentices, or by those under long engagements, at low wages, is cheaper than that performed by fewer willing hands, who are always receiving wages in proportion to their work.

An opinion prevails, or did prevail, that work executed by those not regularly trained to a business could not be so well done as when performed by the journeyman who has served his time—a legal hand, as they call themselves; but, so far as my experience goes, this idea is totally fallacious, and the experience of many of the large employers of labour leads to the same result. Mr. Whitworth, of Manchester, whose beautifully-finished tools are to be seen in all the principal engineering establishments of the kingdom, informed me that that work was performed by men who at one time were common

labourers, and whose intelligence recommended them to his notice. There are many of the members of the Mechanical Section who could, if they liked, tell you the quality of the labour they employ ; but what I know most about is, that the engines on board of all the vessels built by my father since the year 1852, a year memorable for a strike of the legal hands then employed in the engineering establishments of Glasgow, have been made by men who were originally house-carpenters or joiners—that many of the best workers in his ship-yard were hand-loom weavers, and that half-starved nailmakers from St. Ninian's, near Stirling, made passable rivetters in about a month.

In fact, it is evident that Apprenticeships or long engagements, are quite unnecessary ; that a business is learned much more quickly without such ; that it was never intended that there should be castes in the business of England as in the trades of India.

I hope to be able to show now that the system of Apprenticeships, of long engagements, is hurtful to society at large—that it is a system of protection, which, with the enlightened views of this age of freedom, ought not to be tolerated ; that its end is a tyranny and despotism of the idle and indolent over the industrious, which at this moment is growing into one British Trades' Union. I have already proved, to my own satisfaction at least, and I hope to yours also, that Apprenticeships or long engagements are an unnecessary precaution—unnecessary forethought for the employer ; that in all cases, he gets work at least as well, and as quickly done, without the system as with it ; he may therefore give up the system.

Many have given it up ; I have lately done so, and the Americans seem to have entirely repudiated it. That the apprentice himself is not benefited by the system has been, I think, equally proved. He learns his business much quicker without serving an apprenticeship. He does his work at least as well as an apprentice—I say he generally does it better, and many others say the same. He becomes a man sooner. He feels at a time of life when it is most important that he should feel, that it is his own industry alone which advances him ; he is not kept from working with all his heart, from working vigorously, by the feeling that he is not getting value for his services.

Now, as neither the Employer, nor the Apprentice, nor the Public are benefited by the system, why is the system continued ? First, I believe Employers generally have not thought much about it—it is a custom which their fathers left them—a remnant of feudalism. Secondly, the Public are indifferent, and have not yet seen their interest in the matter. Thirdly, Young Hands find that they cannot get employed unless they engage to serve a regular time at a business. It is not the Employer, however, who prevents them from working, but the employer's Workmen—those who have served their time at

the business. These found no doubt, after their time was served, that they had bought their business; that they had bought, and very dearly too, that which did not require to be bought at all. They had paid by their apprenticeship, or long engagement at lower wages than their services were worth, for a monopoly of the business. They therefore try, and naturally so, to keep that monopoly; and in many establishments they do keep it; and prevent the public from getting its work done by any who are able and willing to do it. The public interest in the matter is therefore clear. They have paid for the idleness of the apprentice to begin with, and they are now paying for a monopoly of labour, by the so-called legal hand, much higher than its natural value; for the legal hand takes care to get the number of the apprentices employed limited to a certain fraction of the legal hands. If the employer should take the liberty of adding a few more apprentices, there is a consultation, frequently ending in a strike. The legal workmen want what the employer does not wish to give; they refuse to work, there is again a strike; a regular union of workmen is formed who will not work themselves, nor suffer others, who are both able and anxious to work. I need not describe strikes further; they are admitted to be hurtful to society, and tyrannical and despotic towards their fellow-workmen. His Grace Archbishop Whately, the President of this Section, has put into my hands a little work of his entitled "*Easy Lessons on Money Matters*," which sets forth, in a simple and lucid manner, the cause and consequence of strikes.

Now I think I have proved what I intended at the commencement, and I have shown also that the system of apprenticeships leads in the end to strikes, trades' unions, disorder, separation of the master from the workmen, and to a state of things the very reverse of what the Bible teaches ought to exist between the parties. If it does all this, then surely the simplest of all remedies is to give it up. Let the Natural Laws have their course, and let Labour be FREE.

**THE MARRIAGES, BIRTHS, AND DEATHS,
REGISTERED IN THE DIVISIONS, COUNTIES, AND DISTRICTS OF ENGLAND.**

*The MARRIAGES for the QUARTER ended SEPTEMBER, 1857, and the BIRTHS
and DEATHS for the QUARTER ended DECEMBER, 1857.*

AS PUBLISHED BY AUTHORITY OF THE REGISTRAR-GENERAL.

THIS Return comprises the BIRTHS and DEATHS registered by 2,196 registrars in all the districts of England during the Summer Quarter that ended on December 30th, 1857; and the MARRIAGES in 12,259 churches or chapels, about 3,913 registered places of worship unconnected with the Established Church, and 628 Superintendent Registrars' offices, in the quarter that ended on September 30th, 1857.

The returns for the quarter are, in some respects, unfavourable, for the mortality is higher than the average mortality of the season. The Asiatic cholera, however, which was threatening in October, was arrested in its course; and the excess of deaths is partly referable to influenza, scarlatina, fever, small-pox, and diphtheria (throat disease). The number of Births in the last three months of the past year exceeds the average; but the Marriages in the three summer months were slightly below the average number for the quarter.

The state of the births and of the deaths on the aggregate of the year 1857, exhibits a favourable aspect, for while the births exceeded, the deaths were below the average.

MARRIAGES.—77,658 persons were married in the three months of July, August, and September. The number is less by 646 than the number of persons who married in the corresponding quarter of 1856. The annual rate of marriage in the quarter was 1·594 persons per cent., the average being 1·608 per cent. In the spring quarter of 1857 the marriage rate was above the average. The marriages fell

**ENGLAND:—MARRIAGES, BIRTHS, and DEATHS, returned in the Years
1851–57, and in the QUARTERS of those Years.**

Calendar Years, 1851–57:—Numbers.

	'57.	'56.	'55.	'54.	'53.	'52.	'51.
Marriages No.	662,884	657,704	635,043	634,405	612,391	624,012	615,865
Births..... „	420,019	391,369	425,703	437,905	421,097	407,135	395,396
Deaths..... „							

Quarters of each Calendar Year 1851–57.

(I.) MARRIAGES:—Numbers.

	'57.	'56.	'55.	'54.	'53.	'52.	'51.
<i>Quarters ended last day of</i>	No.	No.	No.	No.	No.	No.	No.
March	33,381	33,388	29,186	33,234	35,149	32,977	32,724
June	41,296	38,796	38,549	40,518	40,446	40,092	38,635
Septmbr.....	38,829	39,152	37,308	38,182	39,899	38,400	37,316
Decmbr.....	....	47,926	47,070	47,793	49,026	47,313	45,531

Quarters of each Calendar Year 1851–57.

(II.) BIRTHS:—Numbers.

<i>Quarters ended last day of</i>	'57.	'58.	'55.	'54.	'53.	'52.	'51.
	No.	No.	No.	No.	No.	No.	No.
March	170,381	169,252	166,225	160,785	161,729	161,803	157,286
June	170,313	173,204	165,277	172,457	158,697	159,031	159,073
Septmbr.....	161,215	157,633	154,700	154,724	147,602	151,222	150,594
Decmbr.....	160,975	157,615	148,841	146,439	144,363	151,956	148,912

(III.) DEATHS:—Numbers.

<i>Quarters ended last day of</i>	'57.	'58.	'55.	'54.	'53.	'52.	'51.
	No.	No.	No.	No.	No.	No.	No.
March	108,527	103,208	134,542	111,843	118,119	106,358	105,359
June	100,205	100,210	106,493	102,586	107,547	100,625	99,458
Septmbr.....	100,590	91,330	87,646	113,843	92,201	100,382	91,499
Decmbr.....	110,697	96,521	97,022	109,633	103,130	99,770	99,080

off in London, in the South-Eastern, the South-Western, the North-Western, and the York Divisions. In the South Midland, the Eastern, the West Midland, the North Midland, the Northern, and the Welsh Divisions, the marriages, as compared with those in the corresponding quarter of the previous year, increased.

BIRTHS.—The births of 160,975 children born alive, were registered in the last three months of the year 1857. This number exceeds by 6,640 the births in the corresponding quarter of 1856. The births were at the rate of 3·294 per cent. per annum; the average of the previous quarters being 3·146. The increase of births is observable in London and in every other division except the Northern.

The births during the year 1857 amounted to 662,884; or to about 3·434 per cent. on the population.

INCREASE OF POPULATION.—As the Births amounted to 160,975, and the Deaths to 110,697, the natural increase of population was 50,278 in 92 days, or 546 daily in England and Wales. The natural increase in the United Kingdom was probably about 800 daily.

The excess of births over deaths, and therefore the natural increase of the population of England and Wales, was 242,865 in the year 1857, or about 665 daily. In the United Kingdom the natural increase probably did not exceed 1,000 daily.

28,673 Emigrants sailed from the ports of the United Kingdom at which there are Government emigration officers; namely, 27,790 from four English ports, 879 from Glasgow and Greenock, and only 4 from Irish ports. The origin of the 28,673 emigrants was shown in 25,281 instances; and after distributing those not distinguished proportionally, it appears that 11,630 were of English origin; of whom 7,366 sailed to the Australian Colonies, 4,210 to the United States of America, 20 to the North American Colonies, and 34 to other places.*

* From a Return with which the Registrar-General has been favoured by the Emigration Commissioners: the number returned as of English origin was 10,254, while the birthplace of 3,392 was not distinguished; in the above statement a proportional number of these have been added to those returned as of English origin.

212,875 Emigrants sailed from the ports of the United Kingdom in the year 1857, and of that number 78,560 were declared to be of English origin.

The number of English soldiers and sailors who have died abroad, cannot yet be brought into the account.

ENGLAND :—*Annual Rate Per Cent. of MARRIAGES, BIRTHS, and DEATHS, during the YEARS 1853-57, and the QUARTERS of those Years.*

Calendar Years, 1853-57 :—General Per Centage Results.

YEARS	'57.	Mean '47-'56.	'56.	'55.	'54.	'53.
Estimated Population of England in thou- sands in the middle of each Year	19,304,	....	19,045,	18,787,	18,619,	18,403,
Marriages Per ct.	....	·839	·836	·810	·858	·894
Births	3·434	3·346	3·454	3·380	3·407	3·328
Deaths	2·176	2·276	2·055	2·266	2·352	2·288

Quarters of each Calendar Year, 1853-57.

(I.) MARRIAGES :—*Per Centages.*

	'57.	Mean '47-'56.	'56.	'55.	'54.	'53.
<i>Quarters ended the last day of</i>	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
March.....Per ct.	·705	·700	·707	·633	·728	·778
June..... "	·860	·849	·819	·824	·875	·883
Septmbr. "	·797	·804	·814	·787	·813	·859
Decmbr .... "	....	·997	·993	·989	1·015	1·053

(II.) BIRTHS :—*Per Centages.*

	'57.	Mean '47-'56.	'56.	'55.	'54.	'53.
<i>Quarters ended the last day of</i>	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
March.....Per ct.	3·599	3·507	3·585	3·603	3·520	3·578
June..... "	3·546	3·523	3·655	3·534	3·722	3·464
Septmbr "	3·308	3·211	3·278	3·261	3·294	3·177
Decmbr "	3·294	3·146	3·267	3·128	3·111	3·100

(III.) DEATHS :—*Per Centages.*

	'57.	Mean '47-'56.	'56.	'55.	'54.	'53.
<i>Quarters ended the last day of</i>	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
March.....Per ct.	2·292	2·527	2·186	2·916	2·449	2·613
June..... "	2·086	2·268	2·117	2·277	2·214	2·355
Septmbr. "	2·064	2·150	1·899	1·848	2·423	1·985
Decmbr. "	2·265	2·167	2·001	2·039	2·329	2·214

THE WEATHER AND THE PRICE OF PROVISIONS.—The influence of the Weather and the Supply of Food on the births, deaths, and marriages, can be studied in the annexed tables.

Mr. Glaisher has described the weather, p. 107. The high average temperature of the summer was sustained through autumn until the end of the year. In

The Average Prices of CONSOLS, of WHEAT, MEAT, and POTATOES, also the Average Quantity of Wheat sold and imported Weekly, in each of the nine QUARTERS ended December 31st, 1857.

1	2	3	4	5	6	7
Quarters ended	Average Price of Consols (for Money).	Average Price of Wheat per Quarter in England and Wales.	Wheat sold in the 290 Cities and Towns in England and Wales making Returns.	Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the <i>Mess</i> Prices.	Average Prices of Potatoes (York Regents) per Ton at Waterlade Market, Southwark.
			Average Number of Quarters weekly.		Beef.	Mutton.
			No.	No.	d. d. d.	d. d. d.
1855 31 Dec.	£ 88½	s. d. 79 4	126,893	42,358	4½—6½ 5½	4½—6½ 5½
1856 31 Mar.	90½	72 4	92,152	48,018	4½—6½ 5½	4½—6½ 5½
30 June	93½	68 8	104,952	63,093	4½—6½ 5½	5—6½ 5½
30 Sept.	95	72 3	78,208	117,807	4½—6½ 5½	5—7 6
31 Dec.	92½	63 4	112,909	103,328	3½—6½ 5½	4½—6½ 5½
1857 31 Mar.	93½	56 10	102,433	51,310	4½—6½ 5½	5½—7½ 6½
30 June	93½	56 9	107,850	42,178	4½—6½ 5½	4½—6½ 5½
30 Sept.	90½	59 11	92,156	55,384	4½—6½ 5½	4½—7 5½
31 Dec.	89½	52 0	101,025	95,587	4½—6½ 5½	4½—7 5½

Note.—The Total Number of Quarters of Wheat sold in England and Wales, and entered for Home Consumption, has been as follows:—

13 Weeks ended	Qrs. Sold.	Home Consumption. Qrs. Entered.
1855—31 Dec.	1,649,000	550,000
1856—31 March	1,197,000	624,000
" 30 June	1,364,000	820,000
" 30 Sept.	1,016,000	1,531,000
" 31 Dec.	1,467,000	1,446,000
1857—31 March	1,331,000	667,000
" 30 June	1,402,000	548,000
" 30 Sept.	1,198,000	719,000
" 31 Dec.	1,313,000	1,242,000

November and December the temperature fell at Greenwich only to 46° and 45° ; thus remaining 3° and 6° respectively above the average of each of the last two months of the 86 preceding years. The dew point for the quarter was 45.6° , or 4.7° above the average of the 16 previous years. The humidity was 92, saturation being expressed by 100; and the atmosphere was thus 5 points nearer to saturation than it was on an average of 16 years. The rain-fall was 6.0 inches, or 1.1 inch below the average; although on October 22nd nearly *three inches* of rain fell in several places of Norfolk, Cambridge, Hertford, Middlesex, Buckingham, Surrey, and Sussex. The barometer was above the average. Wheat was sown in favourable weather. The country was remarkably green at the end of December. At Ryde fuschias and strawberries were in bloom in December; raspberries were picked on the 20th.

The price of Wheat was 52s. a quarter, while in the corresponding three months of 1855 and 1856 it was 79s. 4d. and 63s. 4d. The reduction was 34 and 19 per cent. respectively on the prices of the two previous years. The price of Beef by the carcase at the Leadenhall and Newgate markets was 5½d. per pound; while it was in the same seasons of 1855 and 1856 respectively 5½d., and 5½d. a pound. Mutton was, in the autumns of the three years (1855, 1856, and 1857,) 5½d. a pound. The Potato crop partially failed, and the average price of York Regents at the waterside market, Southwark, was 140s. a ton, or 16 lbs. for a shilling. In the preceding autumns of 1855, 1856, the price of potatoes was 95s. and 100s. a ton. The price of Potatoes was 40 per cent. higher than it was in the three autumn months of 1856. This high price necessarily limits the consumption of potatoes among the poorer classes of artisans in the towns; and the family of the labourer, whose crop has failed in the country, must suffer still more severely, as he has not the means of purchasing other commodities. The want of potatoes often induces scurvy, but no direct evidence of that disease is yet mentioned by the registrars. It is, however, often the marked cause of other maladies.

STATE OF THE PUBLIC HEALTH.—110,697 Deaths were registered in the last quarter of the year 1857. This number exceeds by 14,176 the deaths in the corresponding quarter of 1856; and by 11,646 the average of the ten previous corresponding quarters. The mortality in the quarter was at the rate of 2.265 per cent. per annum, the average of the season being 2.167. The increase was equivalent to one on every 22 deaths. The increase of the mortality was greatest in the town districts or sub-districts, where 60,186 persons died, that is 6,923 above the average 53,263; while the deaths in the country districts amounted to 50,511, or 4,724 above the average, 45,787. After correcting for increase of population, on the assumption that the population in town and country increased at the same rate as in the ten years 1841-51, the mortality in the town appears to be at the rate of 2.704 per cent., in the country at the rate of 1.926 per cent., per annum. The excess over the average of the season was .182 in the towns, .050 in the country; it was, therefore, more than three times as great in the towns as it was in the country districts.

The Deaths in the year 1857 amounted to 420,019; and if the population of England and Wales is correctly estimated at 19,304,000 in the middle of that year, the rate of mortality was 2.176 per cent., or somewhat less than 22 to 1,000 of the population. The average of the ten preceding years is 2.276 per cent.; consequently the mortality on the year 1857 was below the average.

The proportion of the deaths in a given time to a given population is not an exact measure of its vitality; the mortality being very different at different ages, and the proportional numbers of young and old being disturbed by excesses of births over deaths, and by emigration, the deaths in two equal populations may vary from differences in their composition as to age, without implying any real differences in the vitality. A disturbance may also be produced from disproportions in the sexes,

Under ordinary circumstances the annual rate of mortality, however, at all ages, serves as a sufficiently accurate measure of the relative sanitary condition of the population; and where this is insufficient, the mortality at quinquennial or decennial periods of life may be separately determined.

The mortality of England and Wales in 1857 has been compared with the mortality of England and Wales in the ten previous years, and it may be compared with the mortality (22·36 per 1,000) in the 19 years 1838-56. It is below that average. But is that average itself, it may be asked, the true standard? What is the natural rate of mortality among Englishmen, under favourable sanitary conditions? Under such conditions how long do they live? How many of them die annually? No direct answer can be given to these questions. No large body of Englishmen is breathing pure air, living on a perfectly sound diet, free from all defilement, and free from vice, exercising duly the mind and the body generation after generation. We can point to no model city—to no model caste; we can discover no model parish in the country. In the matter of health we are all very ignorant, or desperately negligent. What courses; then, remain open to the inquirer? One only. The mortality of the districts of England, in which the sanitary conditions are the least unfavour-

Deaths in the Autumn, (Oct.—Dec.) 1847-57.—Numbers.

DEATHS, &c.	1857.	Total 1847-56, (10 Years.)	1856.	1855.	1854.	1853.	1852.	1851.
In 125 Districts and 23 Sub-districts, comprising the Chief Towns	60,186	532,633	62,105	51,985	59,660	57,635	52,711	52,353
In the remaining Districts and Sub-Districts of England and Wales, comprising chiefly Small Towns and Country Parishes ...	50,511	457,872	44,416	45,037	49,973	45,495	47,059	46,727
All England	110,697	990,505	96,521	97,022	109,633	103,130	99,770	99,080

AREA, POPULATION, DEATHS, and MORTALITY per Cent. in the Autumn Quarters, (Oct.—Dec.) 1847-57.

GROUPS	Area in Statute Acres. (England.)	Population Enumerated. (England.)		Deaths in 10 Autumn Quarters, 1847-56.	Average Annual Rate of Mortality per Cent. of 10 Autumn Quarters, 1847-56.	Annual Rate of Mortality per Cent. in the Autumn Quarter 1857.
		June 6-7th, 1841.	March 31st, 1851.			
In 125 Districts, and 23 Sub-Districts, comprising the Chief Towns	No. 2,149,800	No. 6,838,069	No. 8,247,017	No. 532,633	Per ct. 2·522	Per ct. 2·704
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly Small Towns and Country Parishes	35,175,115	9,076,679	9,680,592	457,872	1·876	1·926
All England	37,324,915	15,914,148	17,927,609	990,505	2·167	2·265

able, can be employed as the standard measure until happier times supply the real standard of vitality. Sixty-four districts in various parts of the country are found where the mortality of the people ranged, on an average, extending over ten years, from *fifteen to seventeen* deaths in 1,000 living. This is not an accidental event; the mortality only fluctuates in such places slightly from year to year, and the death rate, under the same circumstances, will not be exceeded. The people dwell in sixty-four districts, extending over 4,797,315 acres; and their number at the last census was 973,070. Undoubtedly the sanitary conditions in which they live are, in many respects, favourable. They generally follow agricultural pursuits; and they are scattered thinly over an open country, often on high ground, so that the impurities which they produce are dispersed and diluted in the air and water. They do not breathe each others exhalations in theatres and churches. They do not drink water sullied by impurities. They do not drink poison in gin palaces. Their minds are not overwrought by dissipation, passion, intellectual effort. But visit their dwellings, and amidst much that is commendable you will discover many sources of insalubrity. The bed-rooms are often small, close, crowded; personal cleanliness is not much studied; the dirty pig and filth of various kinds lie here in close proximity to the house; the land there is imperfectly drained; in the winter clothing, fuel, and food, are scantily enjoyed in all large or improvident families; ignorance yields its baneful fruits; medical advice is ill supplied, or unskilful. Yet the annual mortality per 1,000 of this million, men, women, and children, year after year, does not exceed 17. Is it not evident that under more favourable auspices the death rate would be still lighter? Under such sanitary conditions as are known, and with all the mechanical appliances existing, can we not imagine a community living a healthier life than these isolated people?

Without affirming, on physiological grounds, that man was created to live a destined number of years, or to go through a series of changes which are only completed in eighty, ninety, or a hundred years, experience furnishes us with a standard which can only be said to be too high. 17 in 1,000 is supplied as a standard by experience. Here we stand upon the actual. Any deaths in a people exceeding 17 in 1,000 annually are unnatural deaths. If the people were shot, drowned, burnt, poisoned by strychnine, their deaths would not be more unnatural than the deaths wrought clandestinely by disease in excess of the quota of natural death; that is, in excess of *seventeen* deaths in 1,000 living.

But it may be said that this standard cannot fairly be applied to determine the excessive mortality of large towns, which can never become so healthy as the country. How healthy towns may become we do not know. It is only proved that the population of parts of many towns experiences a mortality little above the natural standard; and that the prevalent diseases are referable to causes which evidently, from their nature, admit of no removal. The question, however, is not—Does the excessive mortality admit of removal? but, Does it exist?—and these two questions have no logical connection. The existence of the connection is established by comparing the actual mortality with the standard. Then the chief causes of the excessive mortality are now ascertained; and if the people have done all they can to remove them, the residual excess may be held to be inevitable. But what is inevitable at one time and in one place is not inevitable at other times and in other places. It is, therefore, of the utmost importance to keep steadily in view all the excessive mortality over and above that which is implied in the great decree: "It is appointed unto man once to die." In London, during the sixteenth century, the population lived about twenty years on an average, and 50 died out of 1,000 living; consequently, the excess over 17 was 33. That this excess was not inevitable is now demonstrated; for with a great increase in number, the population now lives about 37 years, and the mor-

tality has fallen to 25 in 1,000. Is the excess of 8 deaths a year among every 1,000 living inevitable? This cannot be admitted for a moment, if we regard only the imperfect state of those sanitary arrangements which the public authorities of London have within their power. Nor can it be admitted that the excess of 5 deaths—or 22 deaths instead of 17—a year in every 1,000 living is inevitable in England and Wales, with evidence before our eyes of the same violations of the laws of nature in every district.

Whether the causes admit or do not admit of removal, the fact, then, is incontrovertible, and must not be lost sight of, that the excess of deaths in England and Wales over those from causes which exist in sixty-four districts was 91,856 in the year 1857; for 420,019 persons died in that year, and about 328,163 persons would have died had the mortality not exceeded the standard of 17 deaths in 1,000 living. Of the unnatural deaths, 18,328 happened in the country, or in the village districts, and 73,528 in the town districts. The portion of the loss of life falling during ten years in each of the 628 districts of the kingdom has been published in an Annual Report, and deserves to be carefully studied.*

England is a great country, and has done great deeds. It has encountered in succession, and at times in combination, all the great powers of Europe; has founded vast colonies in America; and has conquered an empire in Asia. Yet greater victories have to be achieved at home. Within the shores of these islands the twenty-eight million of people dwell who have not only supplied her armies, and set her ships in motion, but have manufactured innumerable products, and are employed in the investigation of scientific truths, and the creation of works of inestimable value to the human race. These people do not live out half their days; *a hundred and forty thousand* of them die every year unnatural deaths; *two hundred and eighty thousand* are constantly suffering from actual diseases which do not prevail in healthy places; their strength is impaired in a thousand ways: their affections and intellects are disturbed, deranged, and diminished by the same agencies.† Who will deliver the nation from these terrible enemies? Who will confer on the inhabitants of the United Kingdom the blessings of health and long life? Who will give scope to the improvement of the English race, so that all its fine qualities may be developed to their full extent under favourable circumstances? His conquests would be wrought neither by wrong nor human slaughter, but by the application of the powers of nature to the improvement of mankind.

* Reg. Gen. 16th Annual Report, pp. 142—153.

† The annual number of deaths in the United Kingdom is about 616,000; and the number constantly sick is about twice the number of the annual deaths, or 1,232,000. If the annual rate of mortality per 1,000 were reduced from 22 to 17, the deaths would fall to 476,000; the constantly sick to 952,000.

Note.—The numbers of Births and Deaths in this Return are furnished by the Registrars at the end of the Quarter, and have not yet been subjected to revision at the General Register Office; they will, therefore, be found to differ, in some instances, from the more correct numbers to be published hereafter in the Annual Report of the Registrar-General.

MARRIAGES Registered in the Quarters ended 30th September, 1855-57; BIRTHS and DEATHS Registered in the Quarters ended 31st December, 1855-57, in the Divisions of England.

DIVISIONS.	AREA in Statute ACRES.	POPULATION, 1851. (Persons.)	MARRIAGES				BIRTHS				DEATHS				
			Registered in the Quarter ended the last Day of												
			September				December				December				
			1855.	1856.	1857.	1854.	1855.	1856.	1857.	1854.	1855.	1856.	1857.	1854.	1855.	1856.	1857.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
ENGLD. & WALES.....Totals	37,124,915	17,927,609	37,308	39,152	38,829	148,841	157,615	160,975	97,022	96,521	110,697				
I. London.....Totals	78,029	2,362,236	6,957	7,189	6,991	20,884	21,309	22,360	14,251	14,616	15,544				
II. South Eastern Counties	4,065,105	1,628,386	2,994	3,268	3,057	12,271	13,562	13,689	8,304	8,020	8,590				
III. South Midland Counties	3,201,290	1,294,332	1,904	2,112	2,184	9,350	10,108	10,249	6,369	5,903	6,784				
IV. Eastern Counties.....	3,214,099	1,113,982	1,511	1,734	1,747	7,731	8,652	8,719	5,290	5,236	6,418				
V. South Western Counties	4,994,490	1,803,291	2,993	3,461	3,148	12,458	13,559	13,600	8,342	7,973	8,946				
VI. West Midland Counties	3,865,332	2,136,573	4,416	4,571	4,881	18,680	19,629	20,303	11,169	11,724	13,816				
VII. North Midland Counties	3,540,797	1,215,501	2,131	2,191	2,243	10,040	10,474	10,665	5,678	5,690	6,869				
VIII. North Western Counties	2,900,227	2,488,438	6,347	6,445	6,365	22,906	23,568	24,329	16,925	15,945	19,164				
IX. Yorkshire.....	3,654,636	1,789,047	3,963	3,978	3,875	16,206	17,182	17,216	9,361	10,217	12,102				
X. Northern Counties	3,492,322	969,126	1,934	1,954	2,025	9,293	9,683	9,675	5,499	5,555	6,130				
XI. Monmouth and Wales....	5,218,588	1,186,697	2,158	2,249	2,313	9,132	9,898	10,170	5,833	5,642	6,334				

REMARKS ON THE WEATHER,

DURING THE QUARTER ENDING DECEMBER 31st, 1857.

By JAMES GLAISHER, Esq., F.R.S., &c., Sec. of the British Meteorological Society.

October.—Till the 4th the air was warm, being $5\frac{1}{2}^{\circ}$ above the average; it was then cold until the 10th, being deficient from the average by 2° nearly; it was then again warm until the end of the month, being 4° in excess. The mean high day temperature was $61\frac{1}{2}^{\circ}$, exceeding the average by $3\frac{1}{2}^{\circ}$; the low night temperature was 47° , exceeding the average by $3\frac{1}{2}^{\circ}$. The mean temperature of this month was exceeded in the years 1795, 1807, 1811, 1818, and 1831; and was less in all other years since 1771.

November was warm until the 12th, being $6\frac{1}{2}^{\circ}$ in excess; on the 12th and 13th it was cold, being about 5° below the average; it was then again warm until the 24th, being about 3° in excess. From the 24th till the end it was cold, being deficient by $1\frac{1}{2}^{\circ}$. The mean high day temperature was 52° , exceeding the average by $2\frac{1}{2}^{\circ}$; and that of the low night temperature was $40^{\circ}\cdot6$, being $2\frac{1}{2}^{\circ}$ in excess. The mean temperature of the month was $45^{\circ}\cdot8$, being $2^{\circ}\cdot2$ in excess. The mean temperature of this month was exceeded in the years 1806, 1817, 1818, 1821, 1822, 1824, 1846, 1847, and 1852.

December was remarkably warm throughout. The mean high day temperature was $50^{\circ}\cdot3$, exceeding the average by $5\frac{1}{2}^{\circ}$ nearly; and that of the low night temperature was $39^{\circ}\cdot6$, being 4° above the average. The mean temperature of the month was $45^{\circ}\cdot1$, being 5° in excess of the average, and due to both warm days and nights. The mean temperature of this month has been but twice exceeded since 1771, a period of 86 years, viz. in the years 1806 and 1852.

The decrease of mean temperature from October to November varied from 5° to 7° all over the country; and the mean temperatures of November and December were nearly alike; that of the latter month, however, at many places in the Midland and Northern Counties, being the higher of the two.

The mean for the three months ending December was $47^{\circ}\cdot9$. For the same period in the year 1806 it was $48^{\circ}\cdot5$, in the year 1818 it was $47^{\circ}\cdot2$, in the year 1821 was $47^{\circ}\cdot4$, in the year 1831 was $47^{\circ}\cdot1$, in the year 1847 it was $47^{\circ}\cdot5$, and in 1852 was $48^{\circ}\cdot1$. In all other years since 1771 it has been less than 47° . So that the temperature of the past quarter, in a corresponding period, has been but twice exceeded during an interval of 86 years.

The mean temperature of the dew point was above its average in each month of the quarter, and in October and November to greater amounts than the excesses of temperature, and consequently the air was more humid than usual in those months. In December, however, the excess was about the same value as that of the air.

The reading of the Barometer at the level of the sea was 30·31 in. at the beginning of the month of October; descended by the 7th to 28·89 in., the lowest reading during the year; increased by the 13th to 30·23 in., being the highest in the month; decreased to 29·61 in. by the 18th; variable till October 31st, when the reading was 30·23 in.; descended to 29·79 in. by November 2nd; increased by the 12th to 30·83 in., being the highest in the year; descended to 29·32 in. by the 24th, being the lowest in the month; then variable, but generally increasing, till December 8th, when it read 30·76 in.; then descended to 30·48 in. by the 10th; increased to 30·80 in. by the 12th, being the highest reading but one in the year; decreased to 30·10 in. by the 20th; and increased to 30·64 in. by the end of the year. The

mean reading in October was slightly in excess, in November and December considerably above the average of the preceding 16 years; no mean reading has been so high in November, and the reading in December has been exceeded but once, viz., in 1843.

The fall of rain was in excess in October; on the 22nd a very heavy fall took place over the counties of Hertford, Cambridge, Buckingham, Middlesex, Surrey, Kent, Norfolk, and Sussex; it fell to the depth of nearly 3 inches in several places. In November and December the fall of rain was deficient, and was somewhat deficient upon the quarter, and about $3\frac{1}{2}$ inches deficient upon the year.

The mean temperature for the air at Greenwich for the quarter ending November, constituting the three autumnal months, was $52^{\circ}8$, being $3^{\circ}4$ above the average of the preceding 86 years.

1857. Months.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.		Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames					
		Mean.	Diff. from Average of 86 Years.	Diff. from Average of 16 Years.	Mean.	Diff. from Average of 16 Years.	Mean.	Diff. from Average of 16 Years.	Mean.		Diff. from Average of 16 Years.	Mean.	Diff. from Average of 16 Years.		
Oct.	52.9	+3.6	+3.6	51.6	+3.7	50.3	+4.8	14.5	-0.1	...	In. .368	+0.63	Gr. 4.1	+0.6	
Nov.	45.9	+3.4	+3.3	45.0	+2.9	44.1	+3.8	11.3	-0.1	49.3	.289	+0.31	3.3	+0.4	
Dec.	45.0	+6.1	+4.8	43.9	+5.2	42.4	+5.5	10.7	+1.2	45.6	.268	+0.42	3.1	+0.5	
Mean.....	47.9	+4.4	+3.6	46.8	+3.9	45.6	+4.7	12.2	+0.3		.308	+0.45	3.5	+0.5	

1857. Months.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Move- ment of the Air.	Reading of Thermometer on Grass.					
		Mean.	Diff. from Average of 16 Years.	Mean.	Diff. from Average of 16 Years.	Mean.	Diff. from Average of 16 Years.	Amnt.	Diff. from Average of 40 Years.		Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.	
											At or below 30°.	Be- tween 30° and 40°.	Above 40°.			
Oct.	92	+ 6	In. 29.695	+0.14	Gr. 536	Gr. - 3	In. 4.2	In. +0.9	Miles. 71	0	14	17	35.3	54.0		
Nov.	94	+ 6	29.942	+1.97	548	+ 1	1.3	-1.0	38	11	11	8	23.2	53.2		
Dec.	90	+ 2	30.155	+3.42	553	+ 1	0.5	-1.0	117	12	8	11	24.0	45.0		
Mean.....	92	+ 5	29.931	+1.64	546	+ 0	Sum 6.0	Sum -1.1	Mean 75	Sum 23	Sum 33	Sum 36	Lowest 22.2	Highest 54.0		

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

ENGLAND.—Meteorological Table, Quarter ended 31st December, 1857.

NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tempera- ture in the Quarter.	Mean Monthly Range of Tempera- ture.	Mean Daily Range of Tempera- ture.	Mean Tempera- ture of the Air.	Mean Degree of hu- midity.	WIND.					Mean Amount of Cloud.	RAIN.	
									Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount collected.
										N.	E.	S.	W.			
Guernsey	29.692	67.0	36.0	31.0	21.0	7.1	51.8	80	1.6	14	25	31	22	41	10.8	in.
Helston	29.774	72.0	36.0	36.0	28.7	11.0	52.7	88	1.8	16	23	25	28	55	9.2	
Exeter	29.742	70.4	30.3	40.1	31.3	11.7	50.4	87	1.2	31	12	33	16	64	9.4	
Ventnor	29.825	69.0	36.0	33.0	23.0	6.9	52.5	87	1.2	31	12	33	16	64	9.4	
Worthing	29.819	65.6	35.5	30.1	23.4	6.6	50.3	88	0.7	25	22	24	21	39	7.6	
Hastings	29.758	67.5	35.5	32.0	23.3	7.5	50.2	91	1.9	18	20	29	25	4.7	4.7	
Clifton	29.788	65.4	29.4	36.0	30.5	9.6	48.0	91	0.6	12	28	29	23	60	6.1	
Royal Observatory	29.801	69.0	30.0	39.0	30.6	12.2	47.9	92	...	15	19	29	29	26	6.0	
St. Thomas's Hos.	...	65.7	34.3	31.4	23.9	8.4	49.4	84	...	15	25	22	30	22	5.8	
Oxford	29.822	66.0	30.0	36.0	29.3	10.2	47.3	86	1.2	...	...	...	...	43	6.8	
Hartwell Rectory	29.782	71.0	30.0	41.0	31.0	10.3	47.1	89	0.8	10	20	37	25	28	6.2	
Royston	29.839	71.3	30.6	40.7	28.8	11.3	47.6	88	...	19	15	31	27	71	8.7	
Lampeter	29.775	69.0	21.8	47.2	35.3	12.4	47.9	92	0.5	9	21	37	25	55	7.9	
Norwich	29.791	68.5	29.0	39.5	29.2	10.5	48.3	91	1.3	6	16	38	32	26	4.7	
Derby	29.771	68.0	28.0	40.0	31.3	...	48.2	90	...	...	...	...	...	39	3.2	
Holkham	29.826	68.3	24.5	43.8	31.8	11.4	48.5	87	1.0	13	14	48	17	28	6.9	
Nottingham	29.830	71.0	24.5	46.5	34.1	11.6	46.8	88	0.3	17	19	25	31	46	4.2	
Liverpool	29.807	67.0	32.1	34.9	23.8	7.8	49.5	84	0.8	...	...	...	...	39	5.0	
Manchester	29.783	71.8	17.5	54.3	37.2	12.7	47.0	89	...	4	23	39	26	40	4.8	
Wakefield	29.804	67.7	22.0	45.7	36.1	13.0	46.6	89	1.4	16	18	30	28	56	3.5	
Leeds	29.801	66.0	25.0	41.0	28.7	11.5	48.6	80	...	10	21	37	24	53	3.3	
York	29.735	68.0	23.0	45.0	32.0	10.3	47.5	92	...	7	30	42	13	42	2.6	
Scarborough	29.750	61.5	31.0	30.5	24.4	5.9	48.0	91	2.6	14	16	25	37	...	...
Durham	29.761	65.9	25.5	30.4	27.4	7.9	46.7	87	1.4	...	...	...	...	35	4.3	
Allenheads	29.750	61.2	20.5	40.7	26.7	8.9	43.7	90	1.8	9	16	...	40	63	10.3	

REVENUE.—QUARTER ENDED 31st DEC., 1857.

An Abstract of the Net Produce of the REVENUE of the United Kingdom in the YEARS and QUARTERS ended 31st December, 1856 and 1857.—(Continued from vol. XX., page 452, ante.)

YEARS ended 31st December.				
Sources of Revenue.	1856.	1857.	Increase.	Decrease.
	£	£	£	£
Customs	23,618,375	22,464,352	....	1,154,023
Excise	18,073,778	17,472,000	....	601,778
Stamps	7,268,272	7,269,223	951	....
Taxes.....	3,105,026	3,104,020	....	1,006
Property Tax.....	16,028,422	15,137,997	....	890,425
Post Office.....	2,869,152	2,992,000	122,848	....
Crown Lands.....	284,857	273,654	....	11,203
Miscellaneous	971,106	1,677,096	705,990	....
Totals	72,218,988	70,390,342	829,789	2,658,435
			Net Decr. £1,828,646	

QUARTERS ended 31st December.

Sources of Revenue.	1856.	1857.	Increase.	Decrease.
	£	£	£	£
Customs	6,232,175	5,590,018	....	642,157
Excise	4,816,000	4,769,000	....	47,000
Stamps	1,838,000	1,761,000	....	77,000
Taxes.....	1,356,000	1,361,000	5,000	....
Property Tax.....	1,123,464	808,437	....	615,027
Post Office.....	748,000	810,000	62,000	....
Crown Lands.....	86,000	82,000	....	4,000
Miscellaneous	195,842	725,707	529,865	....
Totals	16,695,481	15,907,162	596,865	1,385,184
			Net Decr. £788,319	

REVENUE (UNITED KINGDOM).—QUARTER ENDED 31ST DECEMBER, 1857 :—APPLICATION.

An Account showing the Revenue and other Receipts of the Quarter ended the 31st of December, 1857; the Application of the same, and the Charge of the Consolidated Fund for the said Quarter, together with the Surplus or Deficiency upon such Charge.

Surplus Balance beyond the Charge of the Consolidated Fund for the Quarter ended 30th September, 1857, viz. :—	£	Amount Applied out of the Income to Supply Services in the Quarter ended 31st December, 1857	£
Great Britain	£63,386	Charge of the Consolidated Fund for the Quarter ended 31st December, 1857, viz. :—	9,549,775
Ireland	504,634	Interest of the Permanent Debt	£6,259,732
	<u>568,040</u>	Terminable Debt	658,387
Income received in the Quarter ended 31st December, 1857, as shown in page 110	16,907,163	Interest of Exchequer Bills (Deficiency)	—
Amount received in the Quarter ended 31st December, 1857, in repayment of Advances for Public Works, &c.	479,768	The Civil List	100,281
	<u>16,954,970</u>	Other Charges on Consolidated Fund	372,971
Balance, being the Deficiency on 31st December, 1857, upon the charge of the Consolidated Fund in Great Britain, to meet the Dividends and other Charges payable in the quarter to 31st March, 1858, and for which Exchequer Bills (Deficiency) will be issued in that Quarter	1,911,623	Advances for Public Works, &c.	322,195
		Sinking Fund	121,084
			<u>7,894,660</u>
		Surplus balance beyond the charge of the Consolidated Fund for the Quarter ended 31st Dec., 1857, viz. :—	
		Great Britain	—
		Ireland	782,188
			<u>782,188</u>
	<u>£18,166,593</u>		<u>£18,166,593</u>

CORN.—Gazette Average Prices, (ENGLAND AND WALES,) during each Week of the Fourth Quarter of 1857; together with the MONTHLY and QUARTERLY Average.

[Communicated by H. F. JADIS, Esq., Comptroller of Corn Returns.]

Weeks ended Saturday, 1857.	Weekly Average. (Per Impl. Quarter.)					
	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1857.—October 3.....	56 8	43 4	27 -	35 6	45 6	43 4
" 10.....	56 8	43 -	25 6	35 7	45 7	43 7
" 17.....	55 10	43 -	25 6	35 4	45 6	44 6
" 24.....	55 6	43 5	25 3	37 4	46 1	44 7
" 31.....	53 11	43 1	25 -	36 10	45 9	45 3
<i>Average for October, 1857..</i>	55 5	43 2	25 7	36 1	45 8	44 2
1857.—November 7.....	52 6	42 3	26 4	36 3	45 -	44 1
" 14.....	51 8	41 3	25 3	34 7	44 9	43 11
" 21.....	51 3	39 10	24 1	35 2	43 9	43 3
" 28.....	49 8	37 7	23 10	33 10	42 8	40 10
<i>Average for November, 1857</i>	51 3	40 2	24 10	34 11	44 -	43 -
1857.—December 5.....	48 3	35 9	23 -	32 9	41 2	40 -
" 12.....	49 5	36 5	23 3	34 1	41 1	41 2
" 19.....	49 3	37 -	23 3	35 7	40 3	40 6
" 26.....	47 5	35 11	23 3	31 6	39 7	40 9
<i>Average for December, 1857</i>	48 7	36 3	23 -	33 5	40 6	40 7
<i>Average for the Quarter ...</i>	52 -	40 1	24 7	34 11	43 7	43 8
<i>Average for the Year 1857..</i>	56 4	42 1	25 -	38 3	43 -	41 4

LONDON STOCK AND SHARE MARKETS.—Oct., Nov., Dec., 1857.

Stocks and Railway Shares.	Amt. of Share.	Amt. Paid.	PRICE ON THE			Highest Price during			Lowest Price during		
			1 Oct.	3 Nov.	1 Dec.	Oct.	Nov.	Dec.	Oct.	Nov.	Dec.
Consols.....	...	...	90½	90	91½	90½	91½	94½ x.d.	86½	87½	90½
Exchequer Bills .....	...	...	7s. dis.	12s. dis.	4s. dis.	2s. dis.	2s. pm.	2s. pm.	20s. dis.	39s. dis.	5s. dis.
Brighton	Stock	100	102½	103	104½	103½	106	106½	100	100	102
Caledonian	"	"	85	78½	77½	86	78½	84	76½	66	76
Eastern Counties	"	"	57½	53½	55½	58½	55½	59	51½	50	54½
Great Northern	"	"	98	94½	92	98½	95	98 x.d.	93	90	91½
Great Western	"	"	54½	50	51½	55½	52½	55	50½	45½	49½
London & North-Western	"	"	97½	95½	95½	98½	96½	97½	93½	93½	95½
Midland	"	"	83	82½	83½	83½	84½	89½	79½	79½	83
Lancashire and Yorkshire	"	"	96½	99½	91½	97½	93½	94½	91½	88	90½
North Staffordshire	90	17½	13½	13½	13½	13½	13½	14	19½	19½	13½
South-Eastern	Stock	100	65½	63½	63½	60½	63½	69½	61½	59	62½
South-Western	"	"	90½	89½	88½	91	89½	95½	87½	81½	87½
North-Eastern—Berwick	"	"	93½	91½	92½	93½	93½	90½	88½	88	92
" York	"	"	78½	78½	81½	80	83	84½	75½	74½	80½
Northern of France.....	20	16	85½	34½	85½	86½	85	88	33½	33½	35
East Indian	Stock	100	97½	101½	107½	103	106½	110½	98	100	106

BANK OF ENGLAND.—WEEKLY RETURN.

An Account, pursuant to the Act 7th and 8th Victoria, c. 32, for each Week during the Fourth Quarter (Oct.—Dec.) of 1857, the Weeks ending on SATURDAY till the 31st October, 1857, and thenceforward ending on WEDNESDAY; the alteration of day being made in order to bring the close of the Return nearer to the publication of each Friday's Gazette.

1.	2.	3.	4.	5.	6.	7.
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.	DATES.	Assets.			Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.	(Saturdays and Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.		
Mins. £	1857.	Mins. £	Mins. £	Mins. £	Mins. £	1857. Per Ct.
24,55	Oct. 3	11,01	3,46	10,08	19,94	8 Oct. 6
24,01	" 10	11,01	3,46	9,54	19,99	
23,40	" 17	11,01	3,46	8,93	20,18	12 " 7
23,25	" 24	11,01	3,46	8,78	19,76	
22,63	" 31	11,01	3,46	8,16	20,37	19 " 8
22,42	Nov. 4	11 01	3,46	7,95	20,27	
21,14	" 11	11,01	3,46	6,67	20,18	5 Nov. 9
22,55	" 18	11,01	5,46	6,08	21,40	
23,26	" 25	11,01	5,46	6,78	21,34	9 " 10
23,37	Dec. 2	11,01	5,46	6,89	21,10	
24,04	" 9	11,01	5,46	7,57	20,14	12 " Gov. Letter
25,40	" 16	11,01	5,46	8,93	19,64	
26,68	" 23	11,01	5,46	10,21	19,25	24 Dec. 8
25,38	" 30	11,01	3,46	10,91	19,32	

BANKING DEPARTMENT.

8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
Liabilities.					DATES.	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.	(Saturdays and Wdnedays.)	Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	1857.	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £
14,55	3,94	8,24	10,00	,88	Oct. 3	10,59	21,84	4,61	,58	37,62
14,55	3,96	8,50	9,67	,87	" 10	10,56	22,40	4,02	,57	37,55
14,55	3,22	4,83	11,13	,87	" 17	10,25	20,54	3,22	,60	34,61
14,55	3,24	4,86	11,26	,82	" 24	10,25	20,40	3,49	,59	34,78
14,55	3,27	5,16	11,49	,81	" 31	10,25	22,20	2,26	,58	35,29
14,55	3,31	4,87	11,91	,81	Nov. 4	10,12	22,63	2,15	,55	35,45
14,55	3,36	5,31	12,94	,85	" 11	9,44	26,11	,96	,50	37,02
14,55	3,43	5,48	13,96	,83	" 18	6,41	30,30	1,15	,40	38,26
14,55	3,45	5,79	14,95	,82	" 25	5,81	31,35	1,92	,48	39,56
14,55	3,46	6,07	14,44	,84	Dec. 2	5,44	31,19	2,27	,46	39,36
14,55	2,49	6,65	14,44	,81	" 9	5,43	30,11	3,90	,50	39,94
14,55	3,52	6,34	15,08	,89	" 16	5,45	29,26	5,76	,52	40,99
14,55	3,52	7,43	15,15	,88	" 23	5,49	28,09	7,43	,54	41,55
14,55	3,56	7,44	15,07	,83	" 30	7,54	27,30	6,06	,55	41,45

CIRCULATION.—COUNTRY BANKS.

Average amount of Promissory Notes in Circulation in ENGLAND and WALES, during the Fourth Quarter (October-December) of 1857, in each Week ended on a Saturday; and also the Average of Promissory Notes in Circulation in SCOTLAND and IRELAND during the Four Weeks ended on the 24th October, the 21st November, and the 19th December, 1857.

ENGLAND AND WALES.				SCOTLAND.				IRELAND.		
DATES.	Private Banks. (Fixed Issues, 4-44.)	Joint Stock Banks. (Fixed Issues, 8-30.)	TOTAL. (Fixed Issues, 7-74.)	Four Weeks, ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 3-09.)	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6-35.)
1857.	Mins. £	Mins. £	Mins. £	1857.	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £
Oct. 3	3,81	3,14	6,95							
" 10	3,89	3,18	7,07							
" 17	3,88	3,15	7,03							
" 24	3,81	3,08	6,89	Oct. 24	1,54	2,71	4,25	3,52	3,74	7,26
" 31	3,78	3,09	6,87							
Nov. 7	3,71	3,07	6,79							
" 14	3,63	3,02	6,65							
" 21	3,50	2,91	6,41	Nov. 21	1,61	2,73	4,34	3,28	3,49	6,77
" 28	3,27	2,78	6,05							
Dec. 5	3,24	2,64	5,88							
" 12	3,14	2,53	5,67							
" 19	3,05	2,46	5,51	Dec. 19	1,65	2,66	4,31	2,96	3,11	6,07

FLUCTUATIONS in the Stock and Share Markets during the YEAR 1857.

Stocks and Railway Shares.	Amount per Share.	Amount Paid.	Price on the 1st Jan. '57.	Highest Price during the Year.	Lowest Price during the Year.	Price 31 Dec. '57.
Consols .....	....	....	94½	94½	86½	93½
Exchequer Bills .....	....	....	par.	7s. 6m.	39s. dis.	2s. 6m.
RAILWAYS—						
Brighton	Stock	100	112	113½	100	107
Caledonian	"	"	63½	86	60½	85½
Eastern Counties	"	"	46½	60	45½	59½
Great Northern	"	"	91½	100	90	98
Great Western	"	"	69½	69½	45½	54½
London and North-Westn	"	"	106½	109½	92½	98½
Midland	"	"	83	92½	73½	91½
Lancashire and Yorkshire	"	"	97½	103½	88	94½
North Staffordshire	20	17½	12½	14½	12	14½
South-Eastern	Stock	100	74	79½	59	72
South-Western	"	"	107½	108½	81½	96
Berwick	"	"	84	98½	83½	93
York and North Midland	"	"	60	87	59½	86½
—						
Northern of France	20	16	37½	41½	32	38½
East Indian	20	100	113½	114½	96	112

QUARTERLY JOURNAL
OF THE
STATISTICAL SOCIETY.

JUNE, 1858.

Twenty-Fourth Anniversary Meeting of the Statistical Society.
Session 1857-58.

[Held at the Rooms of the Society, 12, St. James's Square, London, on Monday,
15th March, 1858.]

RIGHT HON. HOLT MACKENZIE, *Vice-President, in the Chair.*

MR. NEWMARCH, one of the Honorary Secretaries, read the following Report of the Council on the Progress of the Society during the past year:—

Report of the Council for the Financial Year ended 31st December, 1857, and for the Sessional Year ended March, 1858.

THE Council have the satisfaction of again commencing their Annual Report by an announcement of the favourable character of the condition and prospects of the Society.

The Number of Fellows has been maintained notwithstanding the losses sustained by Resignations, and—during the last year—by the occurrence of a more than usual number of Deaths. At the present time, the Society consists of 367 Fellows, of whom 296 are Annual Subscribers, and 71 have compounded for their subscriptions.

The Balance Sheets annexed to this Report, and duly certified by the Auditors, will show the Receipts and Expenditure of the Financial Year ended 31st December, 1857, and the Assets and Liabilities of the Society as nearly as it was practically necessary to ascertain them at the end of that year. Leaving out of view the Balance at the Banker's, at the commencement and close of 1857,

the Total Receipts of the Year were 870*l.*, and the Total Expenditure 755*l.*, showing, therefore, a Surplus on the Year of 115*l.*; and, in point of fact, the Balance of 168*l.* in the hands of the Bankers at the close of 1857 is a larger Balance than the Society has possessed for a very long period. The outstanding Liabilities brought over into 1858 contain no other than the usual items;—the largest item (65*l.*) relating to the cost of the December (1857) *Journal*, and since paid. The sums of 400*l.* and 200*l.* in the Assets, representing an estimated value of the Books in the Library and of the stock of Journals in hand, are inserted on this occasion for the first time. The property represented by these entries is clearly part of the Assets of the Society.

The Council have at all times watched with vigilance the financial condition of the Society; and they are more than ever sensible of the importance of so fostering and husbanding its resources that it may be able to pursue energetically and independently, and free from the necessity of urging solicitations for special pecuniary aid, the objects to which it is devoted.

With the view of increasing the regular income from the sale of the *Journal*, arrangements have been made for the annexation to each Number, of Advertisements relating to public Companies, books, or other matters not opposed to the character of the *Journal* itself; and the Council would ask the assistance of the Fellows in extending this useful and legitimate mode of increasing the value of the Society's official organ, and the resources available for its general objects.

With the close of last year (1857) there were completed Twenty Volumes of the *Journal*, and the arrival of such an epoch in the history of the publication seemed to be a fitting occasion on which to endeavour to introduce such improvements in the arrangement, appearance, and adjustment of the ordinary contents of each Number as the experience of twenty years had suggested. Accordingly, in the First Part of the Twenty-First Volume just issued, some changes have been made of the character alluded to. They were not intended to be extensive; but it is believed that they will have the effect of promoting those great ends of clearness and distinctness;—in themselves no mean object with the careful investigator of statistical evidence.

The Monthly Meetings during the twelve months now ended have fully maintained the high character which has so long attached to the public proceedings of the Society. The attendance of Fellows and Visitors has, on several of the occasions, exceeded the attendance of former Sessions.

The following is a List of the Papers which have been read:—

Dr. Farr.—On the Pay of Ministers of the Crown.

Mr. Samuel Brown.—On the Progress of Fire Insurance in Great Britain as compared with Foreign Countries.

Mr. Hendriks.—On the Land-Tax Statistics of England, and on the Political Arithmetic of the Early Period of its Settlement.

Mr. Newmarch.—On the Electoral Statistics of Counties and Boroughs in England and Wales, 1832-53.

Mr. Samuel Brown.—Report of the Proceedings of the International Statistical Congress, held at Vienna in September, 1857.

Dr. Guy.—On the Annual Fluctuations in the Number of Deaths from various Diseases compared with the Fluctuations in Crime, and in other Events within and beyond the Control of the Human Will.

Col. Sykes.—On Public Works in India.

Mr. Newmarch.—On the History of Prices in 1857.

The proceedings of Section (F), Economic Science and Statistics, at the Dublin Meeting of the British Association in August last, were quite as efficient and satisfactory as at any of those more recent Meetings at which the proceedings of Section (F) have assumed an importance not previously attained. The President of the Section was his Grace the Archbishop of Dublin (Dr. Whateley).

The Society has already received from Mr. Samuel Brown a Report of the proceedings of the International Statistical Congress held at Vienna under the auspices of the Austrian Government in September last; and that Report, accompanied by two official papers by Dr. Farr, is inserted in the Number of the *Journal* just issued. Under a special sanction accorded by the Board of Trade, Mr. Fonblanque and Dr. Farr were authorized to invite the Congress to hold its next meeting in London; and, accordingly, in August or September next year (1859) the Fellows of this Society will have the gratification of welcoming in London the learned and distinguished persons from all parts of Europe, whose presence at the Meetings of the Congress has conferred upon the proceedings of that Body an interest and importance of the highest order. The Council are led to believe that, in whatever arrangements may be made by Her Majesty's Government for the reception of the Congress, it will be regarded as a fundamental condition that this Society—the parent, in a great measure, of systematic statistical research in this country and elsewhere—shall hold a prominent place.

The Committee on Beneficent Institutions, already referred to in the two last Annual Reports, has continued its labours during

the past year, and notwithstanding difficulties which have not unnaturally arisen in dealing with so large and complex a field of inquiry as the various classes of eleemosynary institutions in the Metropolis, progress has been made towards the preparation of a Second Report on a plan even more elaborate than the First.

The Council have had to deplore the loss by death, during the past year, of several of our earliest and most faithful friends and fellow-workers.

In Earl Fitzwilliam we have to lament the loss of a nobleman who, as one of the Founders of the Society, and thrice its President, is to be regarded as one of those Members of the Highest Chamber of the Legislature upon whose minds there was produced, at an early period, a profound impression of the necessity for sound statistical evidence as a primary condition in the forming of general measures of legislation.

By the death of Mr. Charles Hindley, M.P. for Ashton-under-Lyne, the Society has also lost an early and staunch friend. Mr. W. D. Oswald was for some time an Honorary Secretary of the Society.

But the deepest loss of all has occurred within a very short time of the presentation of this Report by the death of our venerable Vice-President Mr. Tooke. To the influence and efforts of Mr. Tooke, and to the example of his writings, the Society is most especially indebted for the vigour and success which marked its early establishment: and certainly there is no one connected with the Society who has attended to it more assiduously, and watched over it more closely for so long a time than the distinguished chief and coadjutor whom we now lament. It will require the lapse of time to reconcile the Members of the Council and the Fellows of the Society to the discontinuance at our meetings of a presence which had become so familiar; and it may be long before the Society can again have the advantage of adding to its ranks a man so justly distinguished for every quality which can give weight to his example, his precepts, and his opinions.

Dr. Truman moved, and Mr. Edward Osborne Smith seconded, the Adoption of the Report, together with the Abstract of Receipts and Expenditure, and the Balance Sheet of Assets and Liabilities.

Mr. Tayler adverted to certain points mentioned in the Report, on which explanations were given by the Council.

A Ballot was then taken for the President, Council, and Officers for the ensuing twelvemonths, and the following was declared to be the List:—

COUNCIL AND OFFICERS FOR 1858-59.

President.

Right Hon. Lord Stanley, M.P.

Council.

Charles Babbage, M.A., F.R.S.
James Bird, M.D.
Sir John P. Boileau, Bart., F.R.S.
Samuel Brown
Edward Cheshire
William Farr, M.D., F.R.S.
Viscount Ebrington, M.P.
Albany Fonblanque
Rt. Hon. Wm. Ewart Gladstone, M.P.
James William Gilbert, F.R.S.
Francis Henry Goldsmid, Q.C.
William Augustus Guy, M.B.
Rt. Hon. the Earl of Harrowby
Bernard Hebelers
Frederick Hendriks
James Heywood, F.R.S.

William Barwick Hodge
Thomas Hodgkin, M.D.
Robert Hunt, F.R.S.
William Golden Lumley
Rt. Hon. Holt Mackenzie, F.R.G.S.
Richard Monckton Milnes, M.P., D.C.L.
William Newmarch
Rt. Hon. Sir J. S. Pakington, Bart., M.P.
Rt. Hon. Lord Stanley, M.P.
Colonel W. H. Sykes, M.P., F.R.S.
John William Tottie
Col. Sir A. M. Tulloch, K.C.B.
Richard Valpy
Lord Harry George Vane, M.P.
Wm. Arthur Wilkinson

The names of the New Members of the Council are placed in Italic.

Treasurer.

William Farr, M.D., F.R.S.

Honorary Secretaries.

William Newmarch | William A. Guy, M.B. | W. G. Lumley

Dr. Camps moved, and Mr. Leone Levi seconded, a vote of thanks to the retiring President, Council, and Officers.

Mr. Hendriks moved, and Sir John P. Boileau seconded, a vote of thanks to the Chairman, after which the Meeting separated.

The following is the Report of the Auditors, (Mr. Hodge, Dr. Finch, and Mr. Sowray,) on the statement of Receipts, &c. :—

“The Auditors, appointed to examine the Accounts of the Statistical Society for the year 1857, herewith report :—

“That they have carefully compared the Entries in the Books, with the several Vouchers for the same, from the 1st January to the 31st December, 1857, and find them perfectly correct; showing the Receipts (including a Balance of 55*l.* 5*s.* 2*d.* from 1856,) to have been 924*l.* 8*s.* 3*d.*, and the Payments 755*l.* 11*s.* 8*d.*, leaving a Balance in favour of the Society of 168*l.* 16*s.* 7*d.* They have also had laid before them an Estimate made by the Council of the Assets and Liabilities of the Society; the former amounting to 1,756*l.* 16*s.* 7*d.*, and the latter to 122*l.* 6*s.* 7*d.*,—showing a Balance in favour of the Society of 1,634*l.* 10*s.*, and they have every reason to believe the Estimate to be a correct one.

C. FINCH
W. B. HODGE, } *Auditors.*
G. SOWRAY, }

RECEIPTS AND PAYMENTS FOR THE YEAR 1857, AND ASSETS AND LIABILITIES ON 31st DECEMBER, 1857.

RECEIPTS.		PAYMENTS.	
	£ s. d.		£ s. d.
Balance from 31st December, 1856, viz.:		Rent (5 quarters)	112 10 0
Cash at Bankers	£59 10 11	Salaries	180 0 0
Less Petty Cash overdrawn	4 5 9	Printing Journal	248 12 6
		Advertising	23 8 6
Dividends	65 6 2	Library	23 6 1
Subscriptions—277 for 1857 at £2 2s.	£581 14 -	Index and Catalogue	6 14 -
Arrears—14 at £2 2s.	29 8 -	Stationery and Sundry Printing	39 13 9
		Postage	9 7 4
Compositions—4 at £21	84 -	Incidental Expenses	14 6 7
Journal Sales	120 2 8	Ordinary Meetings	18 6 5
Advertisements in Journal	28 5 -	Fire and Light	18 6 6
		Office Furniture	8 3 -
		Special Outlays (Committee on Beneficent Institutions)	68 17 -
		Balance carried to 1858, viz.:	
		Cash at Bankers	£168 19 8
		Less Petty Cash overdrawn	3 1
			168 16 7
	£924 8 3		£924 8 3

LIABILITIES.		ASSETS.	
	£ s. d.		£ s. d.
Printing Journal, December, 1857	64 18 6	Cash Balance	168 16 7
Stationery and Sundry Printing	14 4 4	Investments—	
Lighting	2 8 3	3 per Cent. Consols, £328 14s. 4d.,	cost £200
Index to Catalogue	7 6 6	New 3 per Cent., £567 17s. -d.,	" 667
Miscellaneous	7 13 8		867 -
Advertising December Journal	5 2 3	Property—Books in Library	£400
Printing for Committee on Beneficent Institutions	20 13 6	Journals in Stock	200
		Furniture	100
		Arrears recoverable	700 -
Balance in favour of Society	1,684 10 -		21 -
	£1,766 16 7		£1,766 16 7

Notes on Public Works in India. By COLONEL SYKES, F.R.S., M.P.

[Read before the Statistical Society of London, 19th January, 1858.]

CONTENTS:

	PAGE		PAGE
I.—Introduction	121	IV.—Directors' Despatches of May, 1853, and July, 1854	126
II.—Reorganisation of Public Works Department.—Di- rectors' Despatch of March, 1852	122	V.—Roads	128
III.—Lord Dalhousie's Minute of July, 1854	124	VI.—Navigation of Indian Rivers	129
		VII.—Canals generally	130
		VIII.—The Ganges Canal	133
		IX.—Expenditure on Public Works in 1853-4-5	137

I.—Introduction.

THE subject of Public Works in India is so vast that, for details, I shall limit myself to the Budgets of the last four years received; prefacing them with a few observations upon the present and previously existing modes of managing these important objects.

Previously to the establishment of the present "Department of Public Works," that important branch of administration was variously conducted at the several Presidencies. In Bengal, the system in force for the superintendence and execution of all Public Works, whether Civil or Military, was to give the control to the Military Board. In Madras, there was a threefold management:—

- 1st. The Public Works Department of the Board of Revenue.
- 2nd. The Superintendent of Roads.
- 3rd. The Military Board.

In Bombay, the Military Board was the one controlling authority, though the Superintendent of Roads and Tanks, while subordinate, occupied a position apart from the rest of the system. A complete re-organization of the Department, at all the Presidencies, was resolved upon in 1854, and a separate Department of the State was framed for the consideration of all questions connected with Public Works.

One important feature in the new system, was the introduction of Annual Budgets, under which all projects recommended by the Local Governments are submitted together for the approval of the Supreme Government. Another is the preparation of an Annual Progress Report, prepared from materials furnished by the several Local Governments, and containing an analysis of the circumstances affecting the progress and cost of each work.

II.—Reorganization of Public Works Department.—Directors' Despatch of March, 1852.

The best account that can be given of the reforms which have been made during recent years in the Department of Public Works in India, will be furnished by the following passages from a Despatch by the Court of Directors to Bengal, dated 3rd March, 1852, and written with reference to a Report of the preceding year on the measures of Reorganization required.

The despatch is as follows:—

“1. Pursuant to the instructions given in our letter in the Public Department, dated the 30th January, 1850, a Commission was appointed by you in December of that year, to enquire into the system of superintendence and execution of Public Works in the Presidency of Bengal.

“2. This Commission was composed of the following officers, viz. : Major J. Pitt Kennedy, H.M.S., Consulting Engineer to the Government of India ; Major Baker, Bengal Engineers ; Mr. Charles Allen, Bengal Civil Service.

“3. Their Report bears date the 5th March, 1851.

“4. After a most careful and elaborate enquiry, the Commission have reported unanimously and decidedly against the continuance of the present system of superintendence of Public Works by the Military Board.

“5. It has long been apparent to us, that the magnitude and multiplicity of the executive and controlling duties confided to the Military Board, were greater than could be properly discharged by that Board. We have, in consequence, cordially approved of the measures which have been taken from time to time, for detaching a member of the Board to attend on the Governor-General when absent from the Presidency, in order that the Governor-General might be enabled to deal promptly with questions which would otherwise have required a reference to the Military Board, involving great and injurious delay. We have also cordially approved of the Governor-General having ordered, on his own responsibility, the execution of Military Buildings and other works in the Punjab, and so avoided the loss of time which the distance of 1,000 miles from the Presidency and the forms of office would have necessarily entailed.

“6. It is now in the last degree important that arrangements should be made for securing the prompt and efficient discharge of the duties devolving on the Department of Public Works, and we view with much satisfaction the report of the Commission, as containing results and proposals which we trust will enable your Government to accomplish this great object.

“7. Without encumbering this despatch with all the details which

have led to the results now before us, we will proceed at once to announce to you our approval of the following measures as proposed by the Commission, and unanimously recommended by the Governor-General, by the Deputy Governor of Bengal, and by the Members of Council.

"8. The Department of Public Works, Civil and Military, to be removed from the superintendence of the Military Board, and placed under the administration of one officer in each of the three great divisions, viz. :—

"1st. The Lower Provinces,

"2nd. The North-Western Provinces,

"3rd. The Punjab, including the territories beyond the Jumna,—to be designated Chief Engineer of those divisions respectively.

"Each Chief Engineer to be in direct communication with the Local Government under which he is placed: that in the Punjab being, for the present, the Board of Administration; and to discharge, under the orders of those authorities respectively, the same functions of check and control, within his division, as are now entrusted to the Military Board.

"Each Local Engineer to be invested with administrative authority over both Civil and Military Works, but, except within certain limits of expense to be hereafter fixed, the power of sanctioning new works to be restricted, as at present, to the Governor-General in Council.

"Each Chief Engineer to be assisted by two or more deputies, designated Superintending Engineers, who shall perform the same duty of supervision of executive officers in their several charges as Superintending Engineers at present perform.

"The territories under each Local Government to be divided into compact and manageable districts, each under an executive officer as at present.

"9. Under these arrangements, the separate office of Chief Engineer, as at present constituted, will become unnecessary, and will be abolished on the next vacancy; leaving for future consideration such arrangements as may be required for the general conduct of business connected with the Engineers as a corps of Officers. The officer now holding the office of Chief Engineer, who will be relieved from the duties of the Military Board, will be available for the important duties of Chief Engineer of one of the new divisions.

"10. We entirely approve of the suggestion, that the establishment of executive Engineers shall be strengthened by the addition of a well qualified Accountant, so as to enable the Engineer to devote his principal attention to the Engineering duties confided to him. It is our intention to cause our Engineer Officers under instruction at the

Royal Engineer establishment, at Chatham, to go through a course of book-keeping, in order the better to qualify them to supervise the accountants in the performance of their duties.

"11. We would call your especial attention to the valuable suggestions of the Commission on the subject of contracts for public works, as contained in paragraphs 82-4 of their report.

"12. The arrangements now authorized may, as observed by the Governor-General, be expected to produce the following important advantages:—

"The inconvenience now so sensibly felt from the enormous territory included in the Presidency being superintended by a single departmental authority, at one extremity of it, will disappear.

"The administrative authority over works both Civil and Military, will, in each local Government, be placed under the guidance of the person or persons best acquainted with the country, its circumstances, and wants; while the same wholesome control over new projects and expenditure, as now exists, will still remain with the supreme Government.

"The chief departmental authority, in each of the three Governments, will be able to obtain that personal knowledge of the works, and of the districts under his control, which the Military Board could never command.

"13. We shall look with much interest for the detailed arrangements which you may propose to adopt, to ensure the energetic and effectual carrying out of the new system.

"14. We await the receipt of your matured opinions as to the increased number of Engineer Officers required for the public services. Meanwhile we shall continue to commission as Engineers, from our Military College, all those cadets who have fully qualified themselves for that branch of the service, according to the established test.

"15. We cannot conclude this despatch without expressing our satisfaction at the manner in which the Commission on Public Works discharged the duty confided to them."

III.—*Lord Dalhousie's Minute of July, 1854.*

The subject was again revived in 1854, and on the 12th July, in that year, the Governor-General (Lord Dalhousie), forwarded to the Court of Directors a minute, of which the following are extracts:—

"8. I have, therefore, now to propose that such an agency shall be provided, by creating an office of 'Secretary to the Government of India in the Department of Public Works.*' The person

* "It appears to me," the Governor-General says, "however, to be essential to the good working and ready acceptance of this important change, that the officer who will thus be raised, in many respects, virtually above all the rest of his profession, should be not merely a highly qualified Engineer Officer, but the very best man, or,

who holds it should always be a highly qualified Officer of the corps of Engineers. He should have the aid of an Assistant-Secretary, also an Officer of the corps of Engineers. His salary, I think, should not be less than that of the Secretary to the Government of Bengal, viz., rupees 3,000 per mensem; and the salary of the Assistant should not be less than that of the Assistant-Secretaries in the Military Department.

"9. All proposals regarding Public Works, and all communications connected with that department, should be made through the office of this Secretary.

"The whole system will thus at once be reduced to order, and Public Works throughout India will become one great separate branch of internal administration, conducted upon settled principles, and with the advantage of the best scientific and professional advice.

"10. It does not seem necessary that the constitution of the new office should impose anything more than a very slight additional burden upon public finances. If it be resolved to appoint a Secretary and Assistant-Secretary to the Government in the Department of Public Works, the existing offices of Consulting Engineer to the Government in the Railway Department, and Assistant, may be abolished. The only additional expense would then be an inconsiderable increase in the salary of the Secretary beyond that now drawn by the Consulting Engineer."

Of the general tenor of this Minute of Lord Dalhousie's, the Directors approved, subject to some conditions, as indicated in the following extract from their reply:—

"29. We are of opinion that the offices of Secretary and Assistant-Secretary should not be strictly limited to the corps of Engineers. Subject to this exception, we sanction this proposal, with two conditions: 1st. That the Officer in question shall be selected from all the Presidencies, as proposed by Mr. J. P. Grant.* 2nd. That the appointment shall be made for five years only, when it may be renewed at the pleasure of Government; but, if not renewed, it will lapse, as a matter of course, and another Officer will be appointed for a similar period.

"We do not object, to the appointment, in the first instance, of Major Baker.

"30. We concur in the views of the Governor-General respecting at least, one of the very best men available in the Engineer Corps of all three of the Presidencies. An officer to do justice to the place should have practical experience in several lines of the profession; eminent scientific acquirements; a very sound, cool head; all combined with the power of becoming a good office-man. Such officers are rare,—and I think that the scheme will be introduced at a disadvantage if it is accompanied by any incidental provision, on the present occasion, which will have the effect of restricting the field of selection, or lowering the standard of the office."

* Systematic organization of Department of Public Works, 30/1/50.

the desirableness of bringing all the expenditure on Public Works under one head of account in the general books, distinguishing original outlay from charges of maintenance; also distinguishing between expenditure in the nature of investment of capital, and disbursements having no such character. Works of irrigation, and any other works which yield a profitable return belong to a totally different class from works not yielding any return whatever.

"31. In constituting a Department of Public Works it will be necessary to divide the business coming before it into branches. For example, Canals of Irrigation and other Works connected with the Revenue Administration, will belong to the Revenue Branch: Jails to the Judicial: Roads and Bridges to the Public: Churches to the Ecclesiastical. We wish this classification to be observed in your correspondence, and in that of the subordinate Governments, with us. Thus classified, the whole of the Public Works of India will be brought into view in one Department, 'The Department of Public Works;' under which head our despatches relating to them will be in future addressed to the several Governments."

IV.—*Directors' Despatches of May, 1853, and July, 1854.*

The two following letters of May, 1853, and July, 1854, from the Court of Directors, will also show the careful measures which have been taken to place the service of Public Works in India on the soundest bases.

The following are extracts from the Directors' despatch of the 24th May, 1853:—

"4. It is our opinion that the object in view* may best be attained by the adoption of a plan of the following description:—Each of the local Governments should require, annually, from the officers who, in the respective Presidencies, may be vested with the general charge of the roads, a statement of the new works most urgently required for the purposes of intercommunication, and the execution of which, within the ensuing year, he may be prepared to undertake. On receiving this statement it would be the duty of the Government to decide, after a careful consideration of the circumstances of the Presidency at the time, whether the works proposed had been properly selected, in preference to others, for immediate execution; and having come to a conclusion on this point, the whole scheme, involving the proposed expenditure on new roads and bridges for the coming year, should be submitted for your final sanction and approval.

"5. The plan above indicated, though peculiarly required with reference to the means of internal communication, ought also to be applied to Public Works of every description; and believing that

* The application of a larger portion of the Annual Revenue to Public Works, together with part of the Cash Balances.—Despatches 24/5/53, and 7/6/54.

much benefit would arise from the means it would afford of bringing annually under review the wants of each Presidency, as regards buildings, works of irrigation, and other works of a miscellaneous character, we direct that its operations be extended accordingly. It is desirable that, with respect to these works, as in the case of roads, the statements should exhibit the entire expenditure proposed to be incurred on new works, whatever may be the amount of the estimate for each; and we forward to you in the packet, a copy of the Ordnance Estimates as annually laid before Parliament. You will find in that portion of them which relates to Public Works, the Form giving the estimated expense of new works, and the past as well as probable expense of those in progress; and we should recommend that this form should be adopted, so far as it is applicable to the circumstances, in India.

"6. We wish it to be distinctly understood that in issuing these orders it is far from our desire either to place any further restriction on the amount heretofore expended on works of public improvement, or to deprive the Governments of Fort St. George and Bombay of any of the power they have hitherto possessed of authorizing expenditure on such works. Our object is, primarily to secure the application of the money to be expended, in such a way as to produce the greatest possible benefit to the country and to the community; but the proposed plan, while preserving to your Government that general control over the finances of India, which it is intended that you should possess, will have the advantage of relieving your Government from that unnecessary distraction of attention and waste of time which arise from a number of separate projects, relating to objects of a kindred nature, being brought under your consideration at different periods."

And the following are extracts from the Directors' letter of the 5th July, 1854:—

"5. In accordance with these sentiments, it is our intention that the several subordinate Governments should, without loss of time, review the wants of their respective Presidencies, in respect to Public Works, and submit to you, with as little delay as possible, plans and estimates for such as they may consider to be of the greatest urgency and importance.

"6. In order to avoid any unnecessary loss of time, we shall send to the Governments of the minor Presidencies copies of as much of this despatch as is necessary for this purpose, and direct them to send to you their proposals for Public Works, with the necessary plans and estimates.

"7. On receipt of the plans and estimates, which should be framed in the mode pointed out in our despatch of the 24th May, 1853, and which, without being, in the first instance, framed in great detail, should convey such a general idea of each work as will enable your

Government to form a general estimate of the value and importance of each work, as well as of its probable cost, you will proceed to make a comparison of the various proposals, and will decide on those which should be undertaken in each Presidency, due weight being, of course, given to the opinions of the local Governments as to the particular works which they recommend. It is our desire that special consideration be given to the works of the Madras and Bombay Presidencies, in which, from different causes, the execution of works of improvement has not been proportionate with that in other parts of India, and in which, on the other hand, there is full scope for a largely increased expenditure, and every prospect of a fair return for the outlay, especially in works for improving the irrigation of the country.

"8. You will report to us, with as little delay as possible, your decision on these points; and we particularly desire that a full report may be made to us as to the means of providing adequate superintendence, so as to insure the proper execution of such works as you may recommend, and you will forward to us the plans, maps, and estimates of the several works recommended by the local Governments; together with your proceedings on them, for our final approval."

Such were the elaborate and detailed orders of the Court of Directors to insure efficiency. I shall now proceed to results; but as the subject of Public Works is so vast, I must confine my notices to the details of the most important labours, the Ganges and other Canals, Irrigation Works, and Roads; but an inspection of the several Tables will show that there has not been any stint or want of encouragement on the part of the Honourable Court with respect to all branches whatever, that could advantage the public interests.

The tables of the four years' estimates comprise an outlay of more than 10 Millions Sterling, averaging $2\frac{1}{2}$ Millions Per Annum; and it may truly be said that, but for this outlay for a prospective but certain good, there would have been an annual surplus over expenditure in the revenues of India; and the misrepresentations, now designedly made, of mismanagement of the Indian finances would have been deprived of a semblance of truth.

V.—*Roads.*

In the years 1853-4 and 1854-5 the largest items of Expenditure were for Roads and Bridges, and Irrigation Works.

The most noticeable of the Roads were:—

The Dacca and Arracan Military Road:—total length, 827 miles.
Bridging Rivers on the Grand Trunk Road in South Behar and Shahabad.

The Branch Road from the Grand Trunk to Patna; *viâ* Gya.

New Branch of Calcutta Canal.

New Bridge over Tolly's Nulla, at Allipoor. And

The Continuation of the Grand Trunk Road from Calcutta to Peshawar.

The Punjaub Section of this last-mentioned road is the principal undertaking now in hand by the Public Works Department in that province. It extends from Kurnaul to Peshawar, and is about 511 miles in length. Of this, nearly 400 miles were open at the close of the official year 1855-6; and the expenditure up to that period had been 860,000*l.* On the subject of roads in the Punjaub, it would appear, from the Reports for 1854-55 and 1855-56, that, up to May, 1854, 3,600 miles of roadway had been made in Punjaub Proper at a cost of 470,000*l.*; and, in the Cis and Trans-Sutlej States, 1,629 miles at a cost of 75,000*l.*: the aggregate, therefore, was 5,229 miles, and the cost 545,000*l.*

In addition to the Trunk Road before referred to, great progress had been made in many others, while some were in contemplation. In Hazara, and in the Peshawar Valley, 187 miles were completed: in the Kohat District, three valuable Military roads were in progress: whilst numerous others had been roughly made in the Trans-Indus and other districts. On the whole, not less than 3,520 miles of road had been constructed by the Department of Public Works during these two years, which, with the 5,229 miles previously made, make up the large aggregate of 8,749 miles.

The grand trunk road from Calcutta to Delhi, as good as any English turnpike road, is 837 miles long, and cost 489,100*l.* The great Deccan Road from Mirzapoor to Nagpoor is 400 miles long. The Bombay and Agra Road is 735 miles long. Systematic road making commenced in Madras in 1845, and is making great progress.

VI.—*Navigation of Indian Rivers.*

The navigation of the Ganges and the Indus has, to a certain extent, been provided for by Government. Four Government steamers* and four flat-bottomed boats ply on the former, and ten steamers and ten flats on the latter.

In addition to this direct provision of accommodation, the East India Company have lately acceded to proposals for assistance to two schemes for increasing the river navigation in India, *viz.*, a proposition submitted by the Sind Railway Company to run steamers between Kotree, the terminus of the Sind Railway, and Moultan,

* There are also two Companies who run boats from Calcutta, not receiving Government assistance, *viz.*, "The Inland General Steam Navigation Company," for the navigation of the Hooghly and Soonderbunds, and "The Ganges Steam Navigation Company," for the navigation of the Ganges between Calcutta and Allahabad.

the terminus of the Punjaub Railway; and one submitted by the Oriental Inland Steam Navigation Company to open up the navigation of Indian Rivers generally by means of "steam-trains."

The aid promised to the scheme submitted by the Sind Railway Company is a guarantee of interest at the rate of 5 per cent. per annum on capital to the extent of 250,000*l.*, the amount which it is estimated will be required for the undertaking. It is intended to place fifteen steamers on the river; five to be ready for use within two years from the present date, and five more in each of the two succeeding years. The steamers will be worked in connexion with the railway, and will thus be the means of completing a continuous line of communication between Kurrachee and Lahore and Umritsar under one uniform system of management.

The Oriental Inland Steam Navigation Company propose to commence operations on the Indus and Sutlej, by placing on these rivers two "trains" yearly for a period of ten years. Such train is to be capable of carrying, on a light draught of water, either a very large quantity of merchandize, or 1,000 men. The assistance which the Court have promised to this undertaking is a subvention of 5,000*l.* per annum for ten years, the Company agreeing to perform a minimum distance of 20,000 miles yearly. Should the Navigation Company, however, fail to accomplish this distance, or to put on the number of trains stipulated for (the first two trains to be placed on the river within two years from the present date), the agreement, as to the subvention, is to cease and determine, unless the failure, on the part of the Navigation Company, should occur from any cause beyond their control, such, for instance, as the loss of the trains, or any part thereof, by shipwreck while on the voyage to India. The Navigation Company, in return for the subvention, agree to reserve for the East India Company freight to the extent of the value thereof, calculated at the rates now charged by Government on the Ganges boats.

Since the above arrangement was made, the Navigation Company have applied for a modification of the terms of subvention, which is now under the consideration of the authorities.

VII.—*Canals generally.*

The Canals in the North-Western Provinces are—

- 1st. The Delhi Canals, or Western Jumna.
- 2nd. The Doab Canal, or Eastern Jumna.
- 3rd. The Ganges Canal.

The main source of revenue from the Canals west of the Jumna is the water-rent. This, for the year 1846-7, amounted to 26,253*l.* It is computed that, in the year of the great famine, 1837-38, the gross value of crops grown on land irrigated from these Canals, the greater

part of which land would otherwise have been totally unproductive, amounting to 1,462,800*l.*, a sum far exceeding the entire cost of the works.

The next important item of Canal Revenue is mill-rent, which, in 1846-47, amounted to 1,471*l.* Another, though insignificant, source of Revenue is that for Watering Cattle: this, in 1846-47, was 168*l.* This charge is made only to those who pay revenue less than 10*l.* per annum. The other sources are the transit duties, the sale of wood, grass, and fines.*

The following Statement shows the gross revenue for nine years ending 1845-46:—

(A.) DELHI CANAL, or *Western Jumna*, 1837-38 to 1845-6, and 1846-7 to 1854-5.

Year.	Water Rent.	Mill Rent.	Watering Cattle.	Transit Duties.	Sale of Wood and Grass.	Fines for Breach of Regulations.	TOTAL.
	£	£	£	£	£	£	£
1837-38	27,237	578	76	604	522	948	29,966
1838-39	18,964	973	183	822	617	578	22,140
1839-40	22,438	1,456	228	657	482	618	25,882
1840-41	25,581	952	195	973	548	607	28,858
1841-42	26,306	820	155	1,150	560	463	29,457
1842-43	27,930	988	117	793	675	621	31,126
1843-44	26,055	1,259	168	557	482	576	29,099
1844-45	23,102	822	297	659	515	634	26,031
1845-46	26,069	1,325	229	783	705	775	29,887

	£		£
1846-47	30,288	Total	1851-52 32,402 Total
1847-48	29,068	„	1852-53 32,554 „
1848-49	30,959	„	1853-54 34,531 „
1849-50	31,472	„	1854-55 29,279 „
1850-51	30,525	„	

The Delhi Canal, and its branches in the west of the Jumna, originally constructed in the fourteenth and seventeenth centuries, extends to a distance of 425 miles: they had fallen into disuse and consequent decay before the British occupation. Their re-opening has cost 314,380*l.* up to the 1st May, 1844; and the water-rent they have yielded amounts to 334,380*l.*

* *Abstract showing the supposed Value of the Canals West of Jumna as a Property, (1851).*

	£
Land occupied by the Canal Banks and Channel.....	23,402
Public Buildings.....	58,492
Standing Trees	55,527
Cost of Excavation.....	46,179

Total Value of the Canals 183,601

The entire length of the Delhi and Western Jumna Canals is 445 miles, and cost 118,797l.; and the net revenue, after deducting for the Canal and Civil Departments, shows the amount of interest on the invested capital to be 36 per cent.

2nd. There are the same sources of revenue on the *Eastern* as on the Western Jumna. The influence of the famine year is as marked on this as on the other Canals, the gross value of the crops on land which would otherwise have been unproductive being 491,050l. The united Jumna Canals, therefore, saved during the year 1837-38 property to the value of nearly 2 millions sterling.

Nearly half the area irrigated by the Canal has come under its influence since the settlement of the Land Revenue, so that the effect of canal irrigation upon the income of Government can be easily proved. The annual increase due to the canal in the three Districts of Sahrnupore, Moozuffernuggur, and Meerut is 15,275l. If to this sum the annual direct revenue of the canal is added, 10,998l. (in 1845-46), the total return will show 26,274l.*

The following is the direct revenue from this canal for the period of nine years :—

(B.) DOAB CANAL, or Eastern Jumna, 1837-8 to 1845-6, and 1846-7 to 1854-5.

Year.	Water Rent.	Mfl Rent.	Watering Cnls.	Transit Duties.	Sale of Plantation.	Fines.	TOTAL.
	£	£	£	£	£	£	£
1837-38	9,131	500	19	26	122	284	10,083
1838-39	7,301	435	10	42	107	296	8,194
1839-40	7,854	428	6	56	128	381	8,855
1840-41	8,913	329	9	....	247	432	9,932
1841-42	7,888	373	15	96	164	378	8,916
1842-43	10,506	619	3	52	194	368	11,743
1843-44	8,614	817	13	35	141	453	10,076
1844-45	8,478	604	21	28	170	573	9,877
1845-46	9,653	812	10	41	172	308	10,998

	£		£
1846-47	12,175	Total	1851-52 16,685 Total
1847-48	12,540	"	1852-53 15,140 "
1848-49	16,324	"	1853-54 16,182 "
1849-50	14,950	"	1854-55 9,588 "
1850-51	14,283	"	

* Abstract showing the supposed Value of the Eastern Jumna Canal as a Property (1851).

	£
Value of Public Buildings, &c.	88,374
" Land	394
" Plantations	17,143
Total value of the Canal	106,082

The Doab Canal, on the east of the Jumna, appeared, when the country came into British possession, to have been long entirely abandoned. This canal runs a distance of 130 miles, and was re-opened at a cost of 169,842*l*. The return from water-rent is stated at 92,880*l*.

The length of the Doab and Eastern Canal is 142 miles, and the original cost 80,198*l*. The net annual return on the capital laid out is nearly 24 per cent. Since these works first occupied the attention of the British authorities, they have expended upon them a sum of 557,000*l*., and have received from them, in direct canal revenue, nearly 546,000*l*.. They have brought under the influence of irrigation an area of 1,300,000 acres, yielding produce to the annual value of not less than 2½ millions sterling, and supported a population of 600,000 souls.

VIII.—*The Ganges Canal.*

The Ganges Canal is in progress of execution; and the advantages, in point of revenue, can only be estimated by the results of the other canals. The districts to which the influence of this canal will extend embrace an area of 8,255,255 cultivated acres, and 2,846,793 cultivable acres, or, together, 11,102,048 acres. The total area for which irrigation will be provided is estimated to amount to 5,400,000 acres.

The direct anticipated pecuniary returns from the canal may be estimated at 163,850*l*.*

The indirect return from increase of land revenue from the analogous cases of existing canals may be taken at 240,638*l*., making the total pecuniary return, say, 404,488*l*.; or, allowing for annual repairs, a net revenue of 350,000*l*., which, calculated upon an estimated original expenditure of 1,250,000*l*., will show a return of 28 per cent.

The following details will more fully exhibit the real nature of this great work.

The total length of channel navigable throughout the Ganges Canal, including the Trunk and Terminal lines, with the great branches, is very nearly 890 Miles, along which are distributed 17 dams or escapes, with waterways varying from 800 to 18 feet; 202 bridges for the purpose of regulation and cross-communication, with waterways varying from 200 to 20 feet; 297 inlets for local or minor

* *Ganges Canal Estimated.*

	£
Water Rent.....	147,150
Mill do.	10,000
Transit Duties.....	6,000
Sundries	700
	<hr/>
	163,850

drainage; 16 falls for regulating the slopes; 81 locks and navigable channels for navigation; 282 Rajbaha heads for irrigation; an aggregate length of probably not less than 10 miles of bathing Ghats for the use of the community; 49 first class, and 122 second class Chokis for the shelter of the establishments; 6 workshops for supplying the various wants of the canal works; and, lastly, the great aqueduct across the Solani River, unequalled in its dimensions by any work of the kind yet executed throughout the world. It is only necessary to add here that, up to the opening of the canal, Government had expended on the works, south of Roorkee, a sum amounting to about 650,000*l*.

Such is the extent of the work which has been executed on the Ganges Canal, virtually within the last eight years, though it must be remarked that the visible results are far from being a true measure of the amount of labour which has been expended in that time. It is the work of the hand in construction only that is seen on the surface of the country. To estimate the extent of mental and manual labour of other kinds that are required for pure constructive purposes, the records of the office must be examined, and there will be found proofs of the thoughtful care and immense toil with which every part of the great design has been elaborated by those concerned in working it out. Nor should those who execute works of civil engineering in countries overflowing with every resource that mechanical skill and individual enterprise can supply, overlook those peculiar difficulties which beset the engineer's path in India, where his resources are chiefly in himself, and where he must not only be the designer of works, but the head mason, the head carpenter, the head brick and lime burner, in fact, the man of all detail work, or of all general design.

The last point to which it was proposed to advert, in this general sketch, is the nature and extent of the results which are to be anticipated from the execution of the Ganges Canal.

These results arrange themselves into the two following great classes:—

1. Results to the people,
2. Results to the Government.

And it will be convenient to refer to them briefly in their order.

The results to the people may be exhibited under the following heads:—

1. Certain in place of precarious irrigation, in localities where water was before to be had. On this no special remark is called for, as its value is self-evident, though statistics are not at command to admit of this value being stated numerically.

2. Cheaper irrigation from the canal than by any other method now practised. This arises from the smaller amount of animal or

human labour required in using surface irrigation by naturally flowing water than where any mechanical means are used. Well irrigation, at its cheapest, is not less than four times as expensive as canal irrigation, so that, for every Beega watered from the latter, the zemindar will find his expenses, on the item of irrigation, diminished by three-fourths, and the surplus capital in labour or money thus placed at his disposal, can be employed in adding new fields to the cultivated portion of his Rukba.

8. Irrigation, at a moderate cost, in localities where irrigation at all was formerly impossible. The advantage to the zemindar here is almost purely clear gain, and tracts, desert from entire want of water, will, when the canal lines are completed, be irrigable with perfect ease.

4. Increase of produce from land fully and constantly accessible to irrigation over much larger areas than before. This increase is very considerable, and probably would not be over-estimated at a fourth of the returns from the land.

5. Facilities for the production of crops of the more valuable kinds, which cannot be cultivated at all without a certain and abundant supply of water. The effect of increased production and diminished cost thus shown would be to give the whole community cheaper food, and enable it to expend the surplus for other purposes or wants.

6. Increased value to property in land arising from the advantages secured by the presence of the canal.

7. Increase of commercial facilities by the creation of numerous lines of easy and economical transit connected with the great rivers of the Doab.

8. The price to be paid by the people for these advantages is a very moderate water-rent amounting, on the average, to not more than 10 annas per Beega, with a capital expended on the construction of Rajbhas and watercourses, the interest on which, added to the expense of repairing the works, would raise the total charge for irrigation to about 1 rupee per Beega, which would represent the entire outlay of the zemindars. The Mahajuns, or others, using the canal for transit, would pay a transit-duty, purposely fixed much lower than by any other existing means of carriage.

It is hoped that no counteracting disadvantages will arise to mar these promises; and every means that can be thought of will be taken to prevent injury to the land or its inhabitants from the presence of the canal.

The results to Government need be only very briefly adverted to. They are of two kinds: first, direct; and 2nd, indirect or contingent.

The direct results will arise from three main sources:—

1st. The water-rent of 6,750 pymanahs of water, at about an

average of 12*l.* per pymanah. It will be a long time before the full returns can be looked for from this source, as the supply cannot be raised to its maximum till the works are all thoroughly consolidated and prepared for its distribution. But when this time does arrive, the water-rent will give Government an annual return of about 128,250*l.*

2. Transit duties, which may be estimated at about 10,000*l.* per annum.

3. Various miscellaneous items of revenue, which may reach 5,000*l.* per annum.

Hence the gross direct return to the State may be expected to reach ultimately about 145,000*l.* a-year. The annual charge for the maintenance of the work will not fall short of 40,000*l.*; and, considering the time that will elapse before the canal pays its own expenses, with the various contingent works which must be expected to follow, as experience increases, it may be held that the total capital sunk in making the canal, from the period of its commencement to the time when its full returns will be obtained, cannot fall much short of 1,500,000*l.*

A net income of 105,000*l.* on 1,500,000*l.* of capital would be just 7 per cent., and much more than this the direct return can scarcely be expected to prove.

The contingent or indirect returns to Government are mainly derived—

1. From the security against the formidable money payments and remissions required to alleviate famines. What these may be valued at it is difficult to say, but the experience of the famine of 1837-38 proves that it would have been economy to have prevented its occurrence by the total sacrifice of fully two-thirds of the entire capital sunk in the construction of the Ganges Canal; for, if such an act could possibly have prevented it, or greatly alleviated its fatal effects, Government would have been the gainer by the presence of an active cultivating population, which was depressed for years afterwards in the actual state of things. That such prevention or alleviation will be secured by the Ganges Canal admits of no reasonable question.

2. From the increase of land revenue consequent on the extension of the area of irrigation. This may be expected to double the direct returns from the canal itself; and about 14 per cent. on the capital is probably the maximum return to be anticipated as the final result of the execution of the canal.

Such are the chief features of the most remarkable works, for the purposes of irrigation, in the world, as portrayed in the official reports of Colonel Sir Proby Cautley, K.C.B., the projector and finisher of the trunk line of the canal, and in the reports of the

present Engineer and Superintendent of the Canal, Lieut.-Colonel Baird Smith.

IX.—Expenditure on Public Works in 1854-55.

In the Tables I, II, and III, will be found a tabular synopsis of the whole of the expenditure on Public Works by the different Governments of India for the year 1854-55, so far as the Reports sent in have afforded material, and a succession of Tables showing, in a more detailed classification, the objects upon which this expenditure has been incurred.

A few remarks remain to be made upon the facts which these Tables convey.

The whole amount of expenditure, as it stands, is 223 lakhs of rupees, or say 2,230,000*l.*

Of this, 565,000*l.*, or a little more than 25 per cent., is expended on Military Works.

These last are "Public Works" in quite a different sense from that in which roads and canals or harbours are Public Works, and it is as well to keep the distinction marked.

Other buildings also of a Civil character may be considered merely for the convenience of the Administration, and the collection of the revenues.

But still it is gratifying to find that, if we take merely the items included under the heads of "Public" (the great bulk consisting of roads) and of "Irrigation," the sum amounts to upwards of 1,500,000*l.*, or nearly 70 per cent. of the whole expenditure.

The following is the first Table:—

TABLE I.

Synopsis of Expenditure on PUBLIC WORKS in INDIA, as Classified under the

CLASSIFICATION.	Government of India.	PRESIDENCY OF BENGAL.		Punjab.	Madras.
		Lower Provinces.	North-Western Provinces.		
	£	£	£	£	£
1, 2, 3. <i>Public</i> .—(Roads, Navigable Canals, Post Offices, Hospitals, Government Offices)	7,970	75,805	15,461	339,587	281,987
<i>Repairs</i> .....	....	36,340	8,368	633	34,420
4. <i>Judicial</i> .—(Courts, Police Stations, Gaols, &c.) .....	....	10,376	1,142	1,150	2,794
<i>Repairs</i> .....	....	2,047	61	....	1,500
5. <i>Eccelesiastical</i> .—(Churches, Burying Grounds, &c.) .....	....	547	247	3,032	524
<i>Repairs</i> .....	....	1,093	50	....	....
6. <i>Educational</i> .—(Colleges and Schools)....	....	242	2,581	....	68
<i>Repairs</i> .....	....	263	16	....	....
7. <i>Revenue, General</i> .—(Offices, Opium, Salt, Customs, Tolls, &c.) .....	....	8,756	3,466	1,396	2,821
<i>Repairs</i> .....	....	2,815	89	....	1,000
8. <i>Revenue, Irrigation</i> .—(Canals, Tanks, Embankments, Drainage, &c.) .....	....	488	88,307	135,560	104,572
<i>Repairs</i> .....	....	42,380	18,938	3,441	120,000
9. <i>Marine</i> .—(Docks, Harbours, Light Houses, &c.).....	....	1,958	....	....	6,541
<i>Repairs</i> .....	....	....	....	....	1,000
10. <i>Railway</i> .—(Land Purchase, Government Control, &c.) .....	....	20,352	....	....	7,041
Total Original Civil Works	7,970	118,526	111,206	480,726	406,351
<i>Repairs</i> .....	....	84,941	27,525	4,074	157,920
Grand Total, Civil Works.....	7,970	203,467	138,731	484,801	564,272
11. <i>Military</i> .—(Forts, Magazines, Barracks, Cantonments, &c.).....	....	17,852	17,331	257,830	36,141
<i>Repairs</i> .....	....	9,497	3,588	33,081	10,000
Total Military Works.....	....	27,350	20,920	290,911	46,141
Total Civil and Military Original Works	7,970	136,379	128,537	738,557	442,493
Total Repairs .....	....	94,438	31,114	37,155	167,920
GRAND TOTAL OF ALL, 1854-55.....	7,970	230,817	159,652	775,712	610,413

N.B.—The Expenditure on Repairs is not truly shown, having been omitted or imperfectly in these Abstracts, which were not technically

different BRANCHES of the Public Service for 1854-55. (Details in Table II.)

Bombay.	Saugor and Nerbudda Territories.	Hyderabad assigned Districts.	Nagpore.	Pegu.	Tenasserim and Martaban.	TOTALS.		
						Original Works.	Repairs.	GRAND TOTAL.
£	£	£	£	£	£	£	£	£
80,767	15,605	2,589	1,800	69,371	674	891,621	....	....
39,363	12,511	....	....	360	212	....	132,211	1,023,832
6,815	898	2,313	....	3,555	104	29,150	....	....
1,436	....	....	....	....	8	....	5,053	34,204
3,297	....	....	....	428	....	8,076	....	....
592	....	....	....	....	....	....	1,737	9,813
....	....	....	....	....	....	2,893	....	....
....	30	....	....	....	....	....	309	3,203
3,999	....	907	....	124	195	21,668	....	....
1,659	....	....	....	....	8	....	5,573	27,241
26,805	....	1,568	....	....	....	357,302	....	....
....	....	1,271	....	....	....	....	186,031	543,333
4,908	....	....	....	5,404	....	18,812	....	....
1,840	....	....	....	....	18	....	2,858	21,670
2,156	....	....	....	....	....	29,550	....	29,550
128,750	16,504	7,378	1,800	78,884	974	1,359,075	....	....
44,892	12,541	1,271	....	360	246	....	333,775	....
173,642	29,046	8,650	1,800	79,244	1,221	....	....	1,692,850
53,651	945	....	....	97,891	7,042	488,685	....	....
21,068	....	....	....	....	946	....	78,181	....
74,719	945	....	....	97,891	7,988	....	....	566,867
182,401	17,449	7,378	1,800	176,775	8,016	1,847,760	....	....
65,960	12,541	1,271	....	360	1,193	....	411,956	....
248,362	29,991	8,650	1,800	177,135	9,209	....	....	2,259,717

given in several of the Reports. Items have in many cases been transferred to Repairs so returned by the Departmental Offices.

With respect to the preceding Table (I,) it may be pointed out, that the expenditure on Military Works bears to the whole expenditure in the different provinces the following proportions :—

In Bengal	nearly 10½ per cent.
„ North-Western Provinces.....	„ 13 „
„ Punjaub.....	„ 37 „
„ Madras	„ 7½ „
„ Bombay.....	„ 30 „
„ Saugor and Nerbudda	„ 32 „
„ Pegu	„ 55 „
„ Tenasserim.....	„ 87 „

The expenditure in the Punjaub, in 1854-55, has been equal to the sum of the expenditure in Bengal, North-Western Provinces, Bombay, and Pegu.

The expenditure on *Original Works* in the Punjaub nearly equals the aggregate of that in Madras, Bombay, and the North-Western Provinces.

That in *Original Works* in Madras nearly equals the aggregate of the same expenditure in all the provinces in more particular relation to the Supreme Government, except the Punjaub, viz., Bengal, North-Western Provinces, Pegu, Tenasserim, and the Saugor-Nerbudda Territories, a fact scarcely consistent with the local partialities sometimes alleged against the distribution of sanctions by the Supreme Government.

Whilst Madras has spent 270,000*l.* in the construction of Trunk and District Roads, Bengal has spent only 60,000*l.*, and out of the Madras expenditure a sum of 18,000*l.* (on the Akyab Road) might almost be transferred to the heading of Military Works, whilst two or three items consume all the remainder.

The North-Western Provinces show but 3,800*l.* spent on the construction of roads.

In the last case this would *probably* have been considerably increased, had returns of the expenditure from local funds been received.

An interesting subject of inquiry would have been the cost of road maintenance all over India; but the returns of repairs are defective, and other data are wanting.

The next Table (II,) exhibits, in greater detail, the Expenditure set forth in Table I.

TABLE II.—Tabular View of EXPENDITURE on PUBLIC WORKS by the different INDIAN ADMINISTRATIONS in 1854-55, in more detailed classification of objects than given in Table I.

BRANCH, "PUBLIC." (1, 2, 3, £1,023,832.)

(1.) ROADS AND COMMUNICATIONS.

Provinces, 1854-5.	Trunk or Main Roads.	Secondary Roads.	Ferries and sundry Bridges.	Dak Bunga- lows, &c.	Navigl. Canals and Rivers.	Repairs.	TOTAL.
	£	£	£	£	£	£	£
Government of India	7,970	....	....	....	....	....	7,970
Bengal	59,473	3,019	3,959	493	2,901	26,964	95,912
North-Westn. Provinces ..	3,702	164	....	352	....	7,885	12,105
Punjab	272,583	51,577	9,282	98	....	633	334,175
Madras	40,228	230,739	1,313	336	5,671	32,920	311,210
Bombay	46,380	20,426	426	2,850	....	31,780	101,865
Saugor and Nerbudda....	14,416	....	....	....	....	12,164	26,581
Hyderabad .....	....	2,486	....	....	....	....	2,486
Nagpore .....	....	684	....	1,116	....	....	1,800
Pegu	32,724	....	....	....	....	....	32,724
Tenasserim .....	....	674	....	....	....	212	886
Total	477,480	309,772	14,982	5,248	7,673	112,561	927,717

(2.) GENERAL.

Provinces, 1854-5.	Post Offices.	Hospitals and Dis- pensaries.	City Improvements.	Sea Defences.	Miscel- laneous.	Repairs.	TOTAL.
	£	£	£	£	£	£	£
Bengal	858	521	....	....	2,792	7,376	11,548
North-Westn. Provinces ..	1,056	....	....	....	10,185	483	11,724
Punjab	1,025	70	448	....	....	....	1,543
Madras .....	....	106	....	3,286	180	1,000	4,572
Bombay	163	630	1,696	....	2,531	5,363	10,386
Saugor and Nerbudda....	924	....	....	....	....	....	924
Hyderabad	102	....	....	....	....	....	102
Pegu .....	....	....	35,495	....	1,054	360	36,910
Total	4,130	1,328	37,641	3,286	16,743	14,583	77,713

(3.) POLITICAL.

(4.) JUDICIAL.

Provinces, 1854-5.	Govt. Houses & Offices.	Miscel- laneous.	Repairs.	TOTAL Political.	Police and Gaols.	Court Houses, &c.	Repairs.	TOTAL Judicial.
	£	£	£	£	£	£	£	£
Bengal	2,685	....	2,000	4,685	5,761	4,615	2,047	12,424
North-Westn. Prov. ....	....	....	....	....	115	1,026	61	1,203
Punjab	4,501	....	....	4,501	1,150	....	....	1,150
Madras	125	....	500	625	1,696	1,098	1,500	4,294
Bombay	5,661	....	2,219	7,880	4,866	1,948	1,436	8,251
Saugor and Nerbudda....	264	....	347	611	12	886	....	898
Hyderabad .....	....	....	....	....	2,313	....	....	2,313
Pegu .....	....	96	....	96	3,555	....	....	3,555
Tenasserim .....	....	....	....	....	30	74	8	113
Total	13,238	96	5,066	18,401	19,501	9,649	5,053	34,204

TABLE II.—Continued.

Provinces, 1854-5.	(5.) ECCLESIASTICAL.				(6.) EDUCATIONAL.		
	Churches.	Burying Grounds.	Repairs.	TOTAL Ecclesi- astical.	Construc- tion of Schools and Colleges, &c.	Repairs.	TOTAL Educa- tional.
	£	£	£	£	£	£	£
Bengal	414	133	1,093	1,640	242	263	505
North-Western Prov.	61	185	50	297	2,581	16	2,598
Punjab	2,605	426	....	3,032	....	....	....
Madras	448	76	....	524	68	....	68
Bombay	3,025	271	592	3,890	....	....	....
Pegu	165	262	....	428	....	....	....
Tenasserim .....	....	....	....	....	....	....	....
Saugor and Nerbudda .....	....	....	....	....	....	30	30
Total	6,720	1,356	1,737	9,813	2,893	309	3,203

Provinces, 1854-5.	(7.) REVENUE—GENERAL.					(8.) REV.—IRRIGATION.		
	Custom and Toll Houses.	Salt and Opium.	Other Revenue Build- ings.	Repairs.	TOTAL Revenue.	Construc- tion.	Repairs.	TOTAL
	£	£	£	£	£	£	£	£
Bengal	476	6,874	1,406	2,815	11,571	488	42,380	42,868
No.-Wes. Prov.	1,767	952	747	89	3,556	88,307	18,938	107,246
Punjab .....	....	1,396	....	....	1,396	135,560	3,441	139,001
Madras	62	598	2,160	1,000	3,821	104,572	120,000	224,572
Bombay	509	215	3,275	1,659	5,659	26,805	....	26,805
Saugor and Nerb. ....	....	....	....	....	....	....	....	....
Hyderabad .....	....	....	907	....	907	1,568	1,271	2,840
Pegu .....	....	....	124	....	124	....	....	....
Tenasserim .....	....	....	195	8	204	....	....	....
Total	2,814	10,036	8,816	5,573	27,241	357,302	186,031	543,333

Provinces, 1854-5.	(9.) MARINE.			(10.) RAILWAY.		
	Construc- tions.	Repairs.	TOTAL.	Land.	Control, &c.	TOTAL.
	£	£	£	£	£	£
Bengal	1,958	....	1,958	13,911	6,440	20,352
Madras	6,541	1,000	7,541	4,262	2,779	7,041
Bombay	4,908	1,840	6,748	69	2,087	2,156
Pegu	5,404	....	5,404	....	....	....
Tenasserim .....	....	18	18	....	....	....
Total	18,812	2,858	21,670	18,242	11,307	29,550

TABLE II.—Continued.
(11.) MILITARY WORKS.

Provinces, 1854-5.	Defensive Works and Ordnance Buildings.	Accommo- dation for Troops.	Stud and Commis- sariat Buildings.	Canton- ment Roads and Clearance.	Miscel- laneous.	Repairs.	TOTAL. Military.
	£	£	£	£	£	£	£
Bengal	1,342	13,603	132	724	2,048	9,497	27,350
North-Western Prov.	281	15,295	1,317	437	....	3,588	20,920
Punjab	62,195	168,147	5,526	15,874	6,086	33,081	290,911
Madras	431	35,709	....	....	....	10,000	46,141
Bombay	21,560	25,486	872	154	5,577	21,068	74,719
Saugor and Nerbudda	....	945	....	....	....	....	945
Hyderabad	Included	under	Madras.	....	....	....	....
Nagpore							
Pegu	5,062	76,125	1,797	13,400	1,506	....	97,891
Tenasserim	1,756	5,055	147	....	82	946	7,988
Total	92,630	340,368	9,793	30,590	15,301	78,181	566,867

TABLE III.—WHOLE OF INDIA: Abstract of CLASSIFIED EXPENDITURE from the foregoing Tables, 1854-5.

	£	£		£	£
Trunk and Main Roads.....	477,480		Brought forward.....	....	1,071,051
Secondary Roads	309,772		Customs and Tolls	2,814	
Ferries and sundry Bridges	14,982		Salt and Opium	10,026	
Dak Bungalows.....	5,248		Other Revenue Buildings	8,816	
Nayabli. Canals and Rivers	7,673		Repairs	5,573	27,241
Repairs	112,561	927,717	Canals, Tanks, and Em- bankments	357,302	
Post Offices	4,130		Repairs	186,031	543,333
Hospitals, &c.	1,328		Marine Works	18,812	
City Improvements	37,641		Repairs	2,858	21,670
Sea Defences	3,286	77,713	Land, &c., for Railway..	18,242	
Miscellaneous	16,743		Superintendence of Land	11,307	29,550
Repairs	14,583	18,401	Transfer and Control of Railway		
Govt. Houses and Offices	13,238		Total Civil Works....	....	1,692,845
Miscellaneous	96		Defensive Works and Ordnance Buildings..	92,630	
Repairs	5,066	34,204	Accommodatn. for Troops	340,368	
Police and Gaols	19,501		Commissariat Buildings..	9,793	
Court Houses	9,649		Cantonment formatn., &c.	30,590	
Repairs	5,053	9,813	Miscellaneous	15,301	
Churches	6,720		Repairs	78,181	
Burial Grounds	1,356		Total Military Works	....	566,867
Repairs	1,737	3,203	Grand Total, Expen- diture.....	....	2,259,712
Schools and Colleges.....	2,893				
Repairs	309				
Carried forward....	....	1,071,051			

TABLE IV.—*Statistics of Expenditure on several of the Greatest Works still in Progress in India, 1867.*

Names of Works.	Com- menced.	ESTIMATE.	Amount Expended in previous Years.	Amount Expended in 1864-66.	Total Expenditure.
	Year	£	£	£	£
(1.) Grand Trunk Road, Calcutta to Lahore	1831-32	....	721,461 ^a	58,663 ^b	780,124
(2.) Lahore and Peshawur Road	1852	514,066	260,769	224,477	485,246
(3.) Great Deccan Road	1833-34	....	44,654	2,407	47,061
(4.) Patna and Gya Road	1854-55	100,000	....	14,955	14,955
(5.) Dacca and Arracan Road	1853-54	....	11,125 ^c	18,088 ^c	29,213
(6.) Meaday, Prome, and Toungoo Road	1853-54	102,350	8,142	31,245	39,387
(7.) Ganges Canal	1843	1,421,305	1,253,070	71,689	1,324,759
(8.) Barce Doab Canal (Punjab)	1851-52	528,790	171,478	117,939	289,417
(9.) System of Irrigation and Navigation in con- nexion with the Godavery Anicut (Madras) .....	....	....	....	....	....
(10.) Kishna Anicut project (Madras) .....	....	155,000	75,000	23,333	98,333
(11.) Supply Channel to the Eastern Narra (Scinde)....	....	60,452	7,433	6,710	14,144

(1.) This total is imperfect. The amount ^a includes Expenditure on Establishment, Salaries, and Contingencies; ^b does not include the whole of such charges; and the sixth Division has made no Return of Expenditure for 1864-65.

(2.) The original rough estimate for a road "to meet the immediate military wants of the country" was only 155,000*l.* The estimate here taken is that given in Colonel Napier's published Road Report dated September 1854, as a rough calculation of cost of the work as it is being done. It does not include Establishment or Metalling west of the Jhelum.

(3.) Does not include Salaries of Superintending Establishment. The work was principally executed in 1833-34, and its completion, as a first class road, has only lately been undertaken.

(4.) 100,000*l.* is a rough estimate only. A first-class road.

(5.) ^c There is a doubt about these items, from the absence of report from one division.

(6.) The road across the Yoma Mountains from the Irrawaddie to the sea.

(7.) This includes 17,128*l.* spent on Distributary Channels, which is considered an advance recoverable from the cultivators, and is not provided for in the estimate. The Ganges Canal was not fairly started till 1845.

(8.) This estimate was drawn up by Lieutenant Dyes on the basis of Colonel Cantley's G. C. rates. A revised estimate is in preparation, which will amount to about 800,000*l.*

(9.) It is to be regretted that the means of drawing up a Statement of Expenditure on this great system of works does not yet exist in this office.

The preceding Tables (I—IV,) have exhibited the Expenditure on Public Works in the year 1854-5—the two following Tables (V and VI,) contain an outline of the corresponding Expenditure in the anterior year 1853-4.

Table VIII relates to the important and interesting Irrigation outlays in Madras 1836-49.

TABLE V.

WHOLE OF INDIA: EXPENDITURE ON PUBLIC WORKS, 1853-54.

CLASSES OF WORKS. 1853-4.	Salaries, Establi- ments, and Miscellaneous Expenses.	Repairs.	New Works.	Land Rented and Purchased.	TOTAL.
	£	£	£	£	£
Churches, Public Offices, Jails, and Miscellaneous Buildings and Works	181,239	53,712	54,438	2,141	292,533
Embankments .....	....	57,095	....	....	57,095
Roads and Bridges .....	....	182,855	397,663	1,254	581,773
Lighthouses, Dockyards, and Harbours	Included in the above.	4,593	11,211	1,100	16,904
Inland Navigation .....	....	2,820	4,267	....	7,088
Irrigation Works	96,710	246,777	387,382	7,145	738,015
Railroads, { Charges for Government Officers and for Lands supplied to Private Com- panies working under Government Guarantee }	9,758	....	....	16,450	26,208
Electric Telegraph	3,818	....	101,973	....	105,791
Military	123,736	95,634	337,009	13,997	570,378
Unclassified .....	....	....	216,948	....	216,948
Total	415,264	643,491	1,510,895	43,088	2,612,739

In the next Table (VI,) a further detail is given as regards 1853-4.

TABLE VI.

DETAILS of the Principal Items of EXPENDITURE on NEW WORKS, 1853-4 and 1854-5.

Presidency or Province.	NAMES OF THE WORKS.	Expenditure, as per Accounts, of 1853-54.	Estimated for 1854-55.
	<i>Churches, Public Offices, Jails, and Miscellaneous Buildings and Works.</i>	£	£
	The new Works included in the first item of the foregoing Statement are, in very few instances, specified in the Financial Statements, and are very numerous, and for the most part not of any large amount.		
	<i>Embankments.</i>		
	The Expenditure on Embankments includes renewals and new Works as well as repairs; but the whole Expenditure is entered under the single head "Poolbundee."		
	<i>Roads and Bridges.</i>		
<i>Bengal.</i>	New Works on the Grand Trunk Road, namely, the Bridges over the Mugra and Sautgong Khals, the Leelajim, Morhur, Boorya, Bootana, and Barakur Rivers; the Viaduct over the Doorgowtee Flood; and the Causeway in the bed of the Soane.....	11,782	
	The Patna and Gya Road.....	....	....
	The Dacca and Arracan Road.....	29,213	82,200
	The Tongoop Road.....	8,142	....
<i>N.W.P.</i>	The Hindostan and Thibet Road.....	5,640	....
	New Works on the Grand Trunk Road in the North-West Provinces.....	41,670	2,600
	..... " Great Deccan Road.....		
	..... " Agra and Bombay Road.....		
<i>Punjab.</i>	Grand Trunk Road from Kurnaul to Lahore.....		11,957
	Lahore and Peshawur Road.....	202,609	179,582
	Other Roads in the Peshawur Province.....		40,819
<i>Madras.</i>	Trunk Roads in the Madras Presidency.....	29,514	41,075
	Constructing Roads in Bellary to provide for the Poor during the Scarcity.....	24,508	10,716
	Ditto Ditto in Nellore.....	5,400	7,057
<i>Bombay.</i>	District Roads.....	25,335	145,054
	Poona and Sholapoor Road.....	....	11,122
	Other Roads in Bombay and Scinde.....	Not separated from Repairs.	58,962
<i>Bengal and Pegu.</i>	..... Bengal and Pegu.....	13,846	4,109
	Total.....	397,663	618,656

TABLE VII.—*Statements of Receipts and Disbursements by the EAST INDIA COMPANY in ENGLAND AND INDIA, on account of the undermentioned Railways, to date of latest advices received, 1849-57.*

RAILWAY COMPANY.	Estimated Outlay required to complete the several Lines sanctioned.	Amount of Capital at present authorized to be raised.	Paid by Railway Companies.			Amount Expended in the Re-issue by Treasuries.		
			Into Treasury in England, to 31 Dec., 1857.	Into Treasury in India, to 31 Oct., 1857.	Total Sum paid up by Companies.	In England, to 31 Dec., 1857.	In India, to 31 Oct., 1857.	Total Expended or Re-issued.
East Indian Calcutta to Delhi, 1,100 miles. Mirzapore to Jubbulpore, 300 miles.	£ 12,731,000	£ 8,731,000	£ 7,386,479 to 31 Dec., 1857.	£ 225,835	£ 7,612,314	£ 3,381,898 to 31 Dec., 1857.	£ 3,472,951	£ 6,854,849
Great Indian Peninsula To Cullian, 33 miles. To Jubbulpore, 318 miles. To Krishna, 357 miles.	10,000,000	6,000,000 Dfts 333,300 6,333,300	3,022,957 333,300	325,981	3,682,238	1,320,033	1,041,082	2,361,115
Madras To Beymore, 430 miles. Do. to Krishna River, 310 miles.	6,000,000	4,000,000	2,294,235	nil.	2,294,235	1,019,194	1,047,919 to 31 Aug., 1857.	2,067,113
Sinde Karrachee to Kotsu, 120 miles. Projected Moultan to Lahore, 280 miles.	1,000,000	1,000,000	360,360	11,550	371,910	208,840	32,736 including Punjab Surveys, 6,350.	241,576
Bombay, Baroda, &c. 380 miles.	2,000,000	1,750,000	461,344	11,089	472,433	255,402	94,891	350,293
Eastern Bengal 130 to Koostru, near Pubnah.	1,000,000	1,000,000	nil.	nil.	nil.	nil.	nil.	nil.
Total	32,731,000	22,814,000	13,858,668	574,455	14,433,123			

Cost per Mile of such parts as have been Completed.

East India.—Calcutta to Raneeungee 121 miles, about 12,000*l.* per mile. Madras to Arcot 65 miles, about 5,050*l.* per mile. Bombay—not yet shown. The East Indian is earning about 7 per cent. The receipts from the third class passengers are four times greater than those of the first and second classes combined. In the course of 1858-59 large portions of the Lines will be opened. The Electric Telegraphs connect the three Presidencies, and extend over more than 3,000 miles, and extensions are going on to about the same extent. The cost has been about 50*l.* per mile. Although the charges are very moderate, the revenue in the first year's working exceeded the expenses, and they are increasing.

TABLE VIII.

Special and other Works of IRRIGATION Performed

1	2	3	4	5	6	7	8
DISTRICT.		Name of Work and Year in which the First Expenditure (col. 4.) was incurred.	Amount of First Expendi- ture.	Cultivation and Revenue <i>before</i> Influence of Work felt.		Highest Cultivation and Revenue <i>since</i> Influence of Work felt.	
				Cultivation.	Revenue.	Cultivation.	Revenue.
			£	Acres.	£	Acres.	£
Rajahmundry	1	Thoolia Bagah, 1846	820	3,824	1,765	8,116	3,242
do.	2	Samulcottah Channel, 1846	1,347	3,317	1,782	6,339	3,969
		Boopiah Calwah, '39-'41....					
		Gosta Nuddee					
do.	3	Apparow Calwah	1,925	30,336	10,569	46,982	14,906
		Woomalamurroo ditto, and other minor Channels connected with these four					
Masulipatam	4	Pulleiroo Channel, 1837	1,371	2,225	951	15,820	6,991
do.	5	Boodemair Channel, '38-'39	809	not reprtd.	1,751	3,740	2,922
do.	6	Apparow Channel, '42-'45..	875	"	4,431	not reprtd.	10,322
Guntoor	7	Toongabuddra Channel, } '41-'46	3,421	"	1,377	"	5,443
do.	8	Coochenapooddy Tank sup- plying Channel, 1847	36	"	58	"	256
do.	9	Vellatoor Channel from the Krishna, '38-'39	708	"	106	"	1,505
do.	10	Moonunghes Channel from the Krishna	1,185	"	....	....	....
do.	11	Ivany Tank, '39-'40	380	"	nil.	not reprtd.	130
Nellore	12	Veroor River — Channel, } 1847	175	791	483	1,244	742
Cuddapah	13	Tungatoor Dyke, '46-'47	395	249	222	387	344
Bellary	14	Numbelgherry Tank, 1844....	320	not reprtd.	5	not reprtd.	71
Chingleput	15	Spring Channel for the supply of Poosavaukum Tank, '47-'48	160	192	69	316	108
do.	16	Re-opening a River Channel for the supply of the Mana- paukum Tank, '47-'48 ..	149	87	55	161	133
do.	17	Porel Tank supplying } Channel, 1839	1,068	1,256	449	2,004	893
South Arcot	18	Lower Anicut and depen- dent works, '36-'37	7,423	18,934	13,615	34,978	30,375
do.	19	Vellár Anicut, '46-'48	8,291	5,958	3,762	9,158	6,343
do.	20	Rágavien's Channel, '47-'48	1,360	2,668	1,920	3,590	2,531
Salem	21	Extending Mahdévry Tank, } '44-'46	180	71	55	120	89
Tanjore	22	Upper Coleroon Anicut, } 1836	8,340	522,202	270,073	583,464	325,887
do.	23	South Rajah Voikal, 1837....	6,075	24,456	11,438	29,919	13,629

in the MADRAS PRESIDENCY, from 1836 to 1849.

9		10		11		12		13		14		15		16		17		18		19	
Increase and Decrease of Revenue since Influence of Work felt.						Repairs.				Average Annual				Average Annual Per Centages on First Cost, viz., Increase.		Gross Increase at end of Period.					
Total Increase.			Total Decrease.			Net Increase.		Cost of Repairs.		Net Increase after deducting Repairs.		Net Increase.		Net Decrease.		Pr. ct. pr. ann.					
Yrs.	£		Yrs.	£		£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	
5	4,568		....	....		4,568	2,764	1,803	360	....	44	....	....	....	....	....	....	....	....	983
5	6,644		....	....		6,644	1,420	5,224	1,044	....	77½	....	....	....	....	....	....	....	....	3,877
8	21,667		2	2,692		18,975	1,362	17,612	1,761	....	91½	....	....	....	....	....	....	....	....	15,687
12	39,835		2	1,194		38,641	2,463	36,177	2,584	....	188	....	....	....	....	....	....	....	....	34,803
6	5,076		6	4,496		580	267	312	26	....	3½	....	....	....	....	....	....	....	....	....
9	25,041		1	1,754		23,286	577	22,709	2,271	....	259½	....	....	....	....	....	....	....	....	21,834
7	15,382		....	....		15,382	3,970	11,411	1,630	....	47½	....	....	....	....	....	....	....	....	7,989
3	495		1	22		472	183	288	72	....	197½	....	....	....	....	....	....	....	....	252
11	9,276		2	159		9,116	940	8,176	629	....	88½	....	....	....	....	....	....	....	....	7,467
....	....		....	....		....	....	....	....	59	....	....	....	....	....	....	....	....	....	....
12	633		....	....		633	667	....	....	2	....	....	....	....	....	....	....	....	....	....
4	957		....	....		957	33	924	231	....	132	....	....	....	....	....	....	....	....	748
5	503		....	....		503	31	471	94	....	24	....	....	....	....	....	....	....	....	76
7	430		....	....		430	....	430	61	....	19	....	....	....	....	....	....	....	....	110
3	63		....	13		49	....	49	16	....	10	....	....	....	....	....	....	....	....	....
3	206		....	....		206	42	164	52	....	35	....	....	....	....	....	....	....	....	14
13	4,311		....	....		4,311	503	3,807	292	....	27½	....	....	....	....	....	....	....	....	2,738
14	142,297		....	....		142,297	3,997	138,299	9,878	....	133½	....	....	....	....	....	....	....	....	130,876
5	9,265		....	....		9,265	803	8,461	1,692	....	20½	....	....	....	....	....	....	....	....	169
4	1,507		....	468		1,039	28	1,010	252	....	18½	....	....	....	....	....	....	....	....	....
5	117		....	....		117	3	114	22	....	12½	....	....	....	....	....	....	....	....	....
12	240,351		3	32,060		208,291	27,238	181,052	12,070	....	144½	....	....	....	....	....	....	....	....	172,712
14	18,915		....	....		18,915	6,612	12,303	878	....	14½	....	....	....	....	....	....	....	....	6,227

TABLE VIII.—
Special and other Works of IRRIGATION Performed

1		2	3	4	5	6	7	8
DISTRICT.		Name of Work and Year in which the First Expenditure (col. 4.) was incurred.	Amount of First Expenditure.	Cultivation and Revenue before Influence of Work felt.		Highest Cultivation and Revenue since Influence of Work felt.		
				Cultivation.	Revenue.	Cultivation.	Revenue.	
Trichinopoly	24	New Iyen Voikal, 1836.....	£ 1,132	Acres. 14,458	£ 10,238	Acres. 16,031	£ 10,540	
do.	25	Ruttnagoody Anicut and Nuttad Nullah, '47-'48	1,094	2,299	677	2,892	837	
Coimbatore	26	Extension of Poolavalungal Channel, '43-'46	248	140	67	379	137	
do.	27	Nunjah Pogatlore Channel Improvement, '36-'38	488	1,180	589	1,509	760	
do.	28	Wall in front of Calingroyen Anicut, and widening Vunnandoray Aqueduct, '37-'39	453	6,649	8,117	7,140	8,727	
do.	29	Pillyoor, Tandinary, and Sanapareddy Auxiliary Tanks, and Coyenbully Channel, 1838	651	1,707	803	2,219	1,520	
Madura	30	Under Sluice and Wall to Chittanai across Vigay River, '39-'40	246	1,199	471	1,645	982	
Tinnevely	31	Adachany Channel, '40-'44	655	250	125	509	332	
do.	32	Valathacolum Tank, 1846 ..	145	16	5	106	53	
do.	33	Teerovangsdanadapooram Tank, 1847	64	156	108	250	266	
do.	34	Autoor Tank Improvements, '39-'40	324	....	935	not reprinted.	1,594
do.	35	Maranthy New Channel, '37-'41	1,040	265	87	"	292	
do.	36	13 Works, 1847	743	1,575	1,028	2,288	1,357	
			54,111	646,461	348,201	781,306	458,244	
Tanjore	37	Widening Mooliar, 1844	709	8,912	3,538	1,0345	4,306	
do.	38	Hurrychundranuddy Anicut, and Talnoyer Cota-gum, 1842	456	3,094	1,307	4,491	2,641	
do.	39	New Nullar connected therewith, '45-'46	521	6,419	2,571	6,812	2,986	
do.	40	Improvement of Mercal-kurrai River, '46-'49	860	15,927	5,646	18,258	6,323	

Continued.

in the MADRAS PRESIDENCY, from 1836 to 1849.

9		10		11		12		13		14		15		16		17		18		19	
Increase and Decrease of Revenue since Influence of Work felt.						Repairs.				Average Annual				Average Annual		Gross Increase					
Total Increase.		Total Decrease.		Net Increase.		Cost of Repairs.		Net Increase after deducting Repairs.		Net Increase.		Net Decrease.		Per Centages on First Cost, viz., Increase.		at end of Period.					
Yrs.	£	Yrs.	£	£	£	£	£	£	£	£	£	£	£	Pr. ct. pr. ann.	£						
14	1,393	....	1,911	....	1,283	....	....	....	128	....	....	....	....	....	....
3	439	....	....	439	315	124	41	....	3½	....	....	....	....	....	....
8	493	....	....	493	145	348	43	....	17½	....	....	....	....	....	.99
13	1,768	....	....	1,768	320	1,448	111	....	22½	....	....	....	....	....	959
13	3,591	....	....	3,591	1,499	2,091	160	....	35½	....	....	....	....	....	1,638
13	7,620	....	....	7,620	322	7,298	561	....	86¾	....	....	....	....	....	6,646
13	3,486	....	....	3,486	611	2,875	221	....	89½	....	....	....	....	....	2,628
7	1,134	....	....	1,134	96	1,037	148	....	22½	....	....	....	....	....	382
5	179	....	....	179	6	172	34	....	23½	....	....	....	....	....	27
4	419	....	....	419	....	419	104	....	163	....	....	....	....	....	354
11	4,118	....	65	4,053	685	3,367	306	....	94½	....	....	....	....	....	3,043
12	1,336	2	12	1,324	72	1,252	89	....	8¾	....	....	....	....	....	212
2	882	2	642	240	5	235	58	....	7½	....	....	....	....	....	....
574,412		45,494		529,435	59,276	471,475	37,805	190	....	422,567										
					Deduct	Decrease	190			Ded. Dec.		7,037									
					Net	Increase	37,614	Avg. ann. per cent. on 1st cost		69½		415,529*									
7	4,403	....	....	4,403	119	4,283	611	....	86½	....	....	....	....	....	3,573
8	6,859	....	....	6,859	18	6,841	855	....	187½	....	....	....	....	....	6,384
7	2,178	....	....	2,178	18	2,160	308	....	59½	....	....	....	....	....	1,639
4	1,011	....	92	918	219	699	174	....	20¾	....	....	....	....	....	161

* Gross profit on all the works.

In the preceding Statement (VIII.) the prime cost of each work (or the cost to the time at which its results were fairly developed) is alone entered in col. 4, and the subsequent expenditure in col. 14.

This method is preferable to a former one of adding the whole expenditure together, and calculating the per centage of the results thereupon, it being evident that, as the expenditure for repairs and improvements is (like the revenue) spread over a series of years, the difference between the two, divided by the number of years, constitutes the real annual result, to be reckoned as a per-centage upon the prime cost.

It follows from the adoption of this method, and from the omission of some works of an ordinary character, and not admitting of the exhibition of per-centage results, or, as in Tanjore, merged in others, that the total of col. 4 is much less than that of the same column in a former Statement.

The total amount in col. 14 is probably above the truth; as in some instances repairs of old works, or parts of works, have been mixed with those properly belonging to the improvement.

In No. 1, col. 14, shows the repairs and improvements, exclusive of those undertaken for navigation.

As No. 10 was never completed, and consequently produced nothing, the loss upon the expenditure is reckoned at 5 per cent., the usual interest of money.

The expenditure and results of Nos. 37 to 40 are entered only to illustrate the advantages derived from irrigation improvements in the Tritrapoondy talook of Tanjore, which has undergone so beneficial a change therefrom, and are not included in the general totals, being already included under the head of the Upper Coleroon Anicut, which influences them all.

The results of the Anicut are thus ascertained :—

The prime cost is first entered in col. 4.

The average annual expenditure for the whole of the irrigation works in the district (exclusive of those under the Lower Anicut, and exclusive of repairs rendered necessary by the Anicut in Trichinopoly) for the period *after*, and the same for ten *before*, the construction of the Anicut being then ascertained, and the latter average being deducted from the former, the difference is multiplied by the number of years composing the period in question, that is by 15 (from 1836 to 1850), and the product deducted from the aggregate increase of revenue during the same period, the remainder being the net profit, which is again divided by 15, and the quotient is the average annual profit on the prime cost.

This is the only practical way of showing the true value of the Anicut, since, were the different improvements subsequent to that work considered as so many separate bases of calculation, the only effect would be extreme complication, without any more satisfactory result. By the method actually followed, the entire expenditure is brought to account, but all as subsidiary (which it really was) to the Upper Anicut.

The results in this case are shown at a less amount than the fair reality, owing to the comparison of expenditure having included ten years before the construction of the Anicut. But, as the average revenue in col. 6 is reckoned from Fusly ¹⁸⁴⁰₁₈₃₉₋₄₁, the first in which the nunjah cultivation and revenue under the *rivers* are separately shown, it would have been more proper, strictly speaking, to reckon the average expenditure before the construction of the Anicut from that, and not, as it has been, from an earlier year; since the calculation of the revenue, had it been practicable, from the same earlier year would have altered the average in col. 6. Had this course been followed, the gain from the Anicut would, as above said, have appeared much greater; for the expenditure from ¹⁸⁴⁰₁₈₃₉₋₅₁ to ¹⁸⁴⁶₁₈₄₅₋₅₀ averaged 10,416l.

instead of 7,771*l.*, the average (from $\frac{1836}{1836-37}$ to $\frac{1845}{1835-36}$) actually taken, the formed average being, in fact, greater than that of the whole outlay for repairs of any new works (including great improvements to the Anicut, the Caverry Dam, the Coiladdy Calingulah, the Caverry and Vennár Dam [in part], and other considerable improvements, but excluding the Lower Anicut repairs charged under Nos. 18 and 23) subsequent to the construction of the Anicut, which was 9,587*l.*

If, therefore, the six years' average from $\frac{1840}{1830-31}$ to $\frac{1845}{1835-36}$ were taken as the basis, the difference between it and the average since the construction of the Anicut, that is, 10,416*l.* - 9,587*l.* = 829*l.* which $\times 15 = 12,435*l.*$ should be added to the increase of revenue in col. 10, and the total gain would then be 220,726*l.*, which divided by 15, would give the annual gain at 14,715*l.*, or 176½ per cent. on the prime cost. If it were not added, the average annual gain would be 13,886*l.*, or 166½ per cent. on the prime cost.

It is, indeed, a memorable truth that the condition of things before the Anicut required a greater annual expenditure in imperfect and mostly temporary expedients to preserve the cultivation and revenue than what has since been incurred to bring under cultivation an additional area of 61,262 acres (exclusive of the increase under the South Rajah Voikal), besides greatly increasing the productiveness of the old lands.

The whole of the Tanjore expenditure and revenue under the rivers is entered in Nos. 22 and 23, except a moiety of the repairs of the Lower Anicut entered in No. 18.

The principal irrigation works at Madras are those of the Coleeroon and Caverry Rivers. They are of very early date; but have been greatly extended of late years. Up to 1850, they were capable of watering 716,524 acres; and the increase of revenue has been about 44,000*l.* per annum.

The next great work is the Godavery Anicut, upon which, up to 1852, 130,000*l.* had been expended; but a further outlay would be required which would raise the cost to 264,000*l.* The absolute outlay, however, had been already covered by the increased revenue, and it was calculated that, when completed, it would give 300,000*l.* per annum.

The Krishna Anicut was only commenced in 1853. The estimate is 155,000*l.* to irrigate 280,000 to 350,000 acres of land through 290 miles of channels.

In 1854, an expenditure of 86,611*l.* was sanctioned for the construction of an Anicut in the Palar River, in North Arcot, the expected revenue from which is 16,623*l.*

Special and other works of irrigation are shown in the accompanying table from 1836 to 1849.

The Court is also disposed to encourage private companies to undertake irrigation works by guaranteeing interest on the footing of railways; and orders were sent out in September last to the Indian Governments to frame rules under which companies might construct irrigation works.

In a tropical country like India, where for eight months in the

year very few showers of rain fall, and where the monsoons are irregular and uncertain in their supply of water, the importance of works to promote irrigation can scarcely be too highly estimated. Nevertheless it must be borne in mind, that the lands producing the chief grains upon which the great mass of the population lives could not bear a water-tax, which would enhance the price of the cerealia; and, consequently, there is a limit to the politic and benevolent objects of Government in promoting works of irrigation. It is quite a mistake to suppose that the bulk of the population in India lives upon rice, which, from requiring a water supply, has its cost so much enhanced above that of the plentiful panicums and sorghums, that, as a general food, the consumption of rice is only general in the low districts of Bengal, Orissa, Madras, and Malabar. In Central, North-Western, and Northern India, dry grains are the food of the masses.

TABLE IX.

EAST INDIAN RAILWAY.—*First Section from Calcutta to Raneeunge,*
121 Miles.—TRAFFIC RETURNS, 1856.

Goods.	Half Year ended	Passengers.			
		1st Class.	2nd Class.	3rd Class.	TOTAL.
Tons.		No.	No.	No.	No.
33,010	1856.—30th June	6,466	23,256	402,599	432,321
44,675	" —31st Dec.	6,639	25,877	432,605	463,121
77,685		13,105	49,133	835,204	895,442

Note.—In the six months ended 30th June, 1856, the receipts from the Third Class Passenger Traffic were 20,000*l.*, or equal to an average payment per passenger of 11*d.* sterling.

TABLE X.

Expense Incurred on account of the Great TRIGONOMETRICAL SURVEY of India.

Periods.	Area in Square Miles.	Total Cost.	Cost per Square Mile.
	No.	£	£
1800 to 1822.....	165,342	83,537	505
1822 to 1842.....	56,997	89,892	1576
1826 to 1849.....	254,704	167,908	659
Grand Total	477,043	341,278	715

The following table exhibits the Revenue Survey Charges under the different Governments in India, from the year 1822-23 to 1856-57:—

TABLE XI.

Revenue Survey Charges.

	£
Bengal, from 1823-24 to 1855-56	612,446
Tenasserim, from 1834-35 to 1855-56.....	35,236
North-West Provinces, from 1822-23 to 1855-56	405,238
" " Khusreh, from 1833-34 to 1858-59	36,737
Punjab, from 1849-50 to 1855-56	70,999
Cis and Trans-Sutledge States, from 1851-52 to 1855-56	11,375
Bombay, from 1818-19 to 1856-57	818,102
Sind, from 1852-53 to 1856-57	18,221
	<hr/> 2,008,357

	£
Madras, Estimated Survey Charges	384,000
" " Settlement	380,000

Metropolitan Railway Terminal Accommodation, and its Effect on Traffic Results. By WILLIAM ARTHUR WILKINSON, Esq.

[Read before the Statistical Society of London, 16th March, 1858.]

CONTENTS:

	PAGE		PAGE
I.—Introduction.....	156	IV.—Goods Traffic.—Comparative Statements	160
II.—Passenger and Goods Mileage Traffic, 1847 and 1857	157	V.—Actual Effects of Central Termini already opened	162
III.—Great Western Railway compared with other Metropolitan Lines.—Passenger Traffic	159	VI.—Conclusion.—Proposed Remedies	165

I.—*Introduction.*

THE non-shareholding public is scarcely sufficiently aware of the interest which it has in the commercial success of the Railway System.

We hear, some day, that the Great Western Railway Company pays a half-year's dividend of only one-half per cent., and—unless we are amongst the list of shareholders—we merely shrug our shoulders, and are very sorry for *them*, without reflecting, however, that *that* 10s. dividend speaks of shortcomings to the public convenience—it may be to the public *safety*. We were told, for instance, at the last General Meeting that the improvement of this dividend from 10s. to 1l. per cent. had been effected, principally, by economy in the expenditure, diminution of the number of trains, &c. We may expect, therefore, that the public will be asked, to some extent at least, to *porter* their own luggage,—and we *know* that they will have less accommodation in the number of trains. To suppose that much economy is practicable without a diminution of public convenience, is to believe the Directors to have been negligent of their duty, since there has been nothing in the circumstances of this Company for some years past to warrant a lavish or unnecessary expenditure, and we have a right to conclude that as much economy has been already exercised as was consistent with the public convenience.

But if this diminution of expenditure be not attainable, except at the public cost, it becomes an important consideration for us all, whether it be really unavoidable,—whether, in short, an improvement in the condition of the Company is not to be sought in some other direction more in consonance with the public welfare. I believe this to be the case, and it will be my endeavour, in bringing the subject before the Society, to show that there are reasonable grounds for this belief.

Every day this subject becomes of greater importance. It is no longer a question whether we shall travel to Bath, or to Bristol by the York House or White Hart coach: if we cannot afford to post, and that at great inconvenience, we cannot even go by the waggon, we must go by the Great Western Railway—or walk.

II.—*Passenger and Goods Mileage Traffic, 1847 and 1857.*

Before I proceed further, however, with this question, it is proper to state, that I have been induced to examine it more closely from an interest which I have lately taken, at the instance of a friend, in a scheme for carrying a line of railway from Paddington to the Post-Office. The manifest interest which the Great Western Railway Company must have in such a scheme, led my friend to inquire minutely into the circumstances of this and the other railway companies having their termini in London, and the result of his inquiries is what I propose to lay before the Society, who will be pleased to remember that those results are his, and not mine.

It is alleged by the Directors of the Great Western Railway Company that the great depression of the condition of that Company is due to the number of miles of Branch Lines which have been constructed by them, and have not yet come into successful operation. There is, no doubt, something in this; but as other companies have made branch lines which have been unremunerative, we are obliged to seek in some other direction for the cause of the *relatively* unsatisfactory condition of the Great Western Railway Company.

We believe this cause is to be found in the faulty position of its Paddington Station, as regards the wants and convenience of the public; and we think we shall be able to show that all the railways which terminate in the metropolis have either increased their profits, or diminished their losses, in the ratio in which these wants and this convenience have been consulted in their Terminal arrangements.

The Great Western Railway affords the best illustration of this position, because, in the first place, the district through which it runs is, with respect to population, far above the districts traversed by other metropolitan railways, and is of a class and character the most likely to promote railway travelling, comprising, as it does, Windsor, Reading, Oxford, Bath, Bristol, Gloucester, and Cheltenham; and drawing the traffic, *as it does*, by means of contributory lines, from the West of England, and from Wales, through a country where it has been hitherto singularly free from competition. It ought, therefore, to compare favourably, as regards Traffic Receipts, with other metropolitan railways.

In the second place, it is the only railway company professing to accommodate the London traffic, which has done nothing towards

the improvement of the position of its London Terminus, although this terminus is the most remote of any from the heart of the metropolis. A glance at the map [*referring to a map exhibited when the Paper was read*] will show this. You will see there the black lines representing the metropolitan railways as they approach the metropolis and their original termini. The green lines, which you shall see presently, represent the additions or prolongations which have since been made in each case to reach the sources of the traffic.

It is fair to presume that, to the first of these causes, namely, to the large population of this district, and its character, was due the fact that, *ten years ago*, when little had been done towards the development of the London traffic, the Passenger Receipts per mile of this railway were the highest of six then open from London. It will be my business to show that, to the second of these causes is attributable the fact that it now stands fourth on the list in this respect.

It will be seen by reference to the Table I, that for the half-year, ending June, 1847, the Passenger receipts Per Mile were—

	£
Of the <i>Great Western</i>	1,820 per mile.
„ London and North-Western	1,770 „
„ Brighton	1,205 „
„ South-Western	1,145 „
„ South-Eastern	1,135 „
„ Eastern Counties	745 „

Whilst for the same half-year of 1857 they were respectively—

Brighton	£1,450 or £245 Increase per mile.
South-Eastern	1,220 „ 85 „ „
London and North-Western	1,210 „ 560 Decrease „
<i>Great Western</i>	1,070 „ 750 „ „
South Western	1,050 „ 95 „ „
Eastern Counties	605 „ 140 „ „

It is observable here, that the Brighton and South-Eastern Railways, which enjoy, confessedly, the most convenient stations for the City Traffic, are the only two railways which have increased their Passenger Receipts in the last ten years; all the others having decreased, and that in the proportion to the general inconvenience of their stations for passenger traffic: the Great Western exhibits the largest decrease;—then the London and North-Western;—then the Eastern Counties;—and then the South-Western.

The Goods show a uniform increase, of which the London and North-Western, for reasons which will be hereafter given, is the greatest, although it started from the highest point ten years ago.

It is said, however, that this result of the Passenger Traffic, as regards the Great Western, is due to the large number of New Miles

opened by that Company in the course of the ten years, and, no doubt, this has been greater than in the case of any other of the six companies, being 172 per cent. upon the mileage open in 1847. But let us look a little closer at this part of the case.

III.—*Great Western Railway compared with other Metropolitan Lines.—Passenger Traffic.*

As regards the six railways already alluded to, Table II shows the number of miles open, the Receipts for Passengers, the same Receipts per mile;—the Receipts for Goods, the same per mile;—the Total Goods and Passengers per mile;—and the dividend paid at three different half-years, ending in June, 1847, 1852, and 1857; the first line being for 1847—the second for 1852—and the third for 1857. The Table (II) shows, likewise, the miles open in 1857, and those open in 1847.

The Great Northern is excluded, because it was not open at the commencement of the decade. Of course the only fair comparison is in the receipts *per Mile*.

If we examine this Table (II) we shall find that, whilst the Great Western Company has opened, since the half-year ending June, 1847, 172 per cent. of new mileage, its Passenger Receipts for the half-year ending June, 1857, are less, by 41 per cent., than they were for the former half-year. Now it will be seen, that the London Bridge Railways—the Brighton and South Eastern—which have a convenient City terminus, have likewise increased their mileage, respectively, by 52 and 101 per cent., or, in the mean, $76\frac{1}{2}$ per cent., and, according to the Great Western rate of depreciation, their Passenger Receipts per mile ought to be, for 1857, 18 per cent. *less*; instead of which they were, respectively, 20 per cent. and 7 per cent., or, in the mean, $13\frac{1}{2}$ per cent. *more*, in the latter half-year, than in the former, thus showing a disproportion as against the Great Western, with its Paddington Station, of $31\frac{1}{2}$ per cent.—or equal, upon its last half-year's receipts, to 337*l.* per mile, or 302,626*l.* per annum. That is to say, that, unless some other cause than the mere increase of its mileage, has been operating, unfavourably, upon Great Western affairs, and supposing its opportunities to have been equal to those of the Brighton and South-Eastern, it ought to have received more for passengers in the last half-year than it *did* receive by 302,626*l.*—a sum, after deducting its stated working expenses of 42 per cent., equal to 175,000*l.*, or more than 2 per cent. per annum on its ordinary share capital. This is exemplified, although to a less extent, by reference to the state of the other companies.

The South Western, with its Waterloo Terminus, has opened during the same period 111 per cent. of new mileage, and its Passenger Receipts per mile ought, by the same rule, to be 26 per cent.

less; whereas they were only 8 per cent. less, showing a disproportion against the Great Western of 18 per cent., or 172,955*l.* per annum.

The Eastern Counties, with a station at Shoreditch, has opened 100 per cent. of new mileage, and, instead of a depreciation in its Passenger Receipts, per mile, of 24 per cent. as there ought to have been, they are only 20 per cent. less, showing a disproportion against the Great Western of 4 per cent., or 38,435*l.* per annum.

Nor can it be said that the new miles opened by the Great Western are in more barren districts than those of the other railways: on the contrary, the latter compare most unfavourably with the former in population and fertility of traffic.

The London and North Western is the only one of the six metropolitan lines which shows, in comparison with the Great Western, an undue depreciation of Passenger Receipts, per mile, with reference to its increase of mileage. This depreciation ought to have been, by the rule to which we have adverted, 16 per cent.: it was actually 32 per cent., or 16 per cent. in *favour* of the *Great Western*. But the passenger station of the London and North Western Company is likewise very inconvenient for the City traffic, and this Company has been subjected to extraordinary competition during the last five years by the opening of the Great Northern Railway, on the one side, and the extension of the Great Western line to Birmingham, Wolverhampton, and the Mersey, on the other.

It cannot be true, therefore, that the depreciation of the Great Western Passenger Receipts, per mile, has been caused entirely by the construction of new lines, because all the other metropolitan companies have increased their mileage; none have suffered to the same extent as the Great Western, and some have even increased their receipts per mile under this operation.

IV.—*Goods Traffic.—Comparative Statements.*

Having said thus much upon the Passenger Traffic of these several railways, let me draw your attention, for a short time, to the Goods Traffic, which shows, in a still more remarkable degree, the efficacy of convenient terminal arrangements.

It will be seen that there is no case of actual decrease of Goods Traffic, even per mile, upon any of these lines. There is, of course, no decrease of the gross traffic any where, although there is a decrease of Passenger Traffic *per mile* in four cases out of the six. If we examine the middle line, which represents the state of affairs in 1852, we shall find that in that year the Passenger Traffic per mile was in all cases depressed, but that in 1857 this depression was more or less recovered, except in the cases of the Great Western and the London and North Western Companies; so in the Goods Traffic the same depression occurs in all cases except those of the Eastern Counties

and the Brighton, and it is in all cases more than recovered in 1857.

The Goods Traffic of the London and North Western in 1847 was nearly twice as great as that of the Great Western, and more than twice as great as that of any other of the six railways. Yet it was depressed in 1852 in the same proportion as the Great Western, although at that time little or no competition existed with the Great Northern or Great Western Companies.

But about that time the Great Northern was opened on the one side and the Great Western extended on the other, and to that competition was, no doubt, due the circumstance that, from the depression in the Passenger Traffic, per mile, of the London and North Western, no recovery took place; but, on the contrary, a still further depression occurred, and in 1857 the Passenger Traffic, per mile, on that railway was less than it had been even in 1852, although that of all the other railways, except the Great Western, had increased.

Now, it was natural to expect that the Goods Traffic would follow the fate of the Passenger Traffic, and that the same competition, which was equally opened upon both in 1852, would have had a similar result upon both in 1857, and, if that had been so, the plight of the London and North Western would have been little better than that of the Great Western, and we should have had a dividend nearly as relatively low in the one case as in the other. But what did take place, and that in the face of this severe competition? The Goods Traffic on the London and North Western Railway, which had fallen from 900*l.* per mile in 1847 to 865*l.* in 1852, during which time there had been no competition, rose in 1857 to 1,235*l.* per mile, in the teeth of the severe competition to which I have referred.

And why was this? In 1852 was opened the *North London Railway*, which had been wisely fostered and prepared by the London and North Western Company, at an expense of nearly 800,000*l.* That line of railway at once transferred the Goods terminus of the London and North Western Railway from Camden Town to the Minories and the Docks, and placed it, to use the words of a committee of consultation, "in an impregnable position as regards the commerce of the City of London"—a position, in short, to defy competition unless from similar action on the part of its rivals. Is it too much to say, that to this circumstance it is mainly due, that the London and North-Western has continued to pay a dividend of 2*l.* 10*s.* for the half-year, whilst that of its rival, the Great Western, has declined to 10*s.*?

In order to appreciate this statement, let us suppose that the Goods Traffic of the London and North Western had followed the same ratio of depreciation as the Passenger Traffic. We have seen that the depreciation of the Passenger Traffic of the

London and North Western was 16 per cent. greater than, by the rule of new mileage opened, compared with the Great Western, it ought to have been, and this 16 per cent. was, no doubt, due to the severe competition to which I have referred.

Now, if the competition in Passenger Traffic caused a depreciation of 16 per cent. in the receipts, it ought, supposing it to be equally severe upon the Goods (and it was probably more so) to have caused a similar depreciation there likewise. If this had been so, then, as an increased mileage of 172 per cent. on the Great Western produced an increase in the Goods Receipts of 19 per cent.: an increase in the mileage of the London and North Western of 69 per cent. ought to have given an increase of the Goods Traffic per mile of 5 per cent. The Goods Traffic mileage receipts of the London and North Western would therefore have stood thus:—

Goods Traffic.—Decrease by competition	16 per cent.
„ less Increase by new mileage	5 „
Which would leave	11 „

as the rate of decrease at which the Goods Receipts, per mile, of the London and North Western would have stood if the depreciation of the goods had followed the rate of depreciation of the passenger traffic.

But there was actually an increase of 37 per cent. in 1857 instead of a decrease of 11 per cent., which together makes a difference of 48 per cent., which may be fairly assumed to be due to the new stations at the Minories and the Docks, which are so admirably adapted for goods, although they have failed to arrest the depreciation of the passenger traffic. Now, 48 per cent. on 900*l.*, the mileage receipt of the half-year of 1847 is 432*l.*, which, multiplied by the number of miles (637), is equal to 275,000*l.* for the half-year, or 550,000*l.* per annum, which, after deducting 40 per cent. for working expenses, leaves a net sum of 330,000*l.* per annum, nearly equal to $1\frac{1}{2}$ per cent. upon the share capital of the London and North Western Railway, attributable to improved Terminal arrangements.

V.—Actual Effects of Central Termini already opened.

I have thus shown that the Great Western Passenger Receipts are less than they ought to be, upon comparison with other metropolitan railways, by some 800,000*l.* per annum; and unless it can be proved that the Great Western Company labours under other disadvantages, and I contend that the reverse is the fact, I think I have a right to attribute this loss to the unfortunate position of its terminus.

Again, I have shown that the Goods Receipts of the London and North Western Company are more than 500,000*l.* above what they

would have been had they followed the ratio of its Passenger Receipts, which have greatly fallen off, and when I find that a Goods' Station has been constructed on this railway which enormously facilitates the Goods Traffic, and affords little or no advantage to that of passengers, I think I have an equal right to attribute the improvement in the one case, and the falling off in the other, to the efficiency and the inefficiency of the station accommodations, as regards Goods Traffic on the one hand, and Passenger Traffic on the other.

The other Metropolitan railway companies have not been insensible to the value of good terminal arrangements, and every one of them, except the Great Western, has effected some improvement in the position of its Passenger or Goods' Stations, often of both.

We have seen what has been done by the London and North Western.

The Brighton and South Eastern have carried their Goods' Stations to the Bricklayers' Arms from New Cross. The first of these is distant from London Bridge only $1\frac{1}{4}$ miles—the latter $3\frac{1}{4}$ miles.

The Brighton has likewise just determined to raise nearly half-a-million of money to obtain a West-end station at Pimlico; and the South Eastern is projecting a station at Charing-cross.

The South Western has carried its Passenger Station from Nine Elms to Waterloo-road, and *did* propose to come on to London Bridge, and was only deterred by monetary considerations.

The Eastern Counties has made a communication through the Blackwall Railway to Fenchurch Street, and the Blackwall has prolonged its terminus from the Minories to that place.

Now, let us see with what effect all these improvements have been attended.

The gross receipts of the Blackwall Railway for 32 weeks, *after* its extension to Fenchurch Street, were larger by nearly 50 per cent. than they had been for the corresponding weeks of the year *before* the extension.

The Goods' Station of the South Eastern Company was removed from New Cross to the Bricklayers' Arms in 1844, and the gross Goods Receipts for the half-year *after* the removal (with an additional mileage of 20 per cent.), were 84 per cent. larger than those for the corresponding half-year *before* the removal;—whilst the Great Western gross Goods Receipts for the same half-year (with an additional mileage of 16 per cent.) gave an increase of only 30 per cent., showing a greater ratio of increase in the South Eastern of some 37 per cent., attributable, apparently, to the more convenient station.

The Brighton Goods' Station was removed from New Cross to the Bricklayers' Arms in November, 1847, and in five years afterwards their gross Goods Receipts (with an additional mileage of 44 per cent.) had increased 100 per cent.; whereas the Great Western

gross Goods Receipts during the same five years (with an additional mileage of 60 per cent.) had increased only 55 per cent., showing a difference due to the more convenient station of 81 per cent.

The Passenger Station of the South Western Company was extended in 1848 from Nine Elms to the Waterloo Road, about a mile and a quarter, and the gross Passenger Receipts for the year ending June, 1849, after the extension (with a mileage increase of $9\frac{1}{2}$ per cent.), were larger by 15 per cent. than they were for the year before the extension; whilst the Great Western gross Passenger Receipts for the same years, with an increased mileage of 16 per cent., exhibit an increase of only $2\frac{1}{2}$ per cent., making a difference between the receipts of the two companies, with reference to their mileage, of 25 per cent., apparently due to the extension of the South Western Station to Waterloo Road.

The gross Goods Receipts of the London and North Western (with nearly an equal mileage) were greater by 140,000*l.* for the year *after* the extension of the Goods' Station from Camden-town to Haydon Square than they were for the year before that extension, although the increase of the previous year over its predecessor was only 15,000*l.*; showing an increased receipt, apparently due to the extension, of 125,000*l.* in the year.

Now it is fair to ask, what would have been the present position of the South Western, the London and North Western, the Brighton, or the South Eastern Companies if their principal stations had remained, respectively, at Nine Elms, at Camden Town, or at New Cross?

Is it unfair to answer, very nearly the present position of the Great Western?

If we are right in this conclusion, it may be well to attempt to reduce into figures the actual loss to the Great Western Railway Company occasioned by the distance of its Paddington Station from the City. It is difficult, perhaps impossible, to fix the precise amount of this loss, because there are disturbing causes which necessarily affect the receipts of the different metropolitan railways; but the following statement will furnish some idea of its magnitude:—

The Passenger Receipts per mile of the London Bridge railways were, in 1847, for the half-year, some 600*l.* *less* than those of the Great Western; and for the last half-year of 1857, after ten years of development of the London traffic, they are some 300*l.* *more*; making together a difference of 900*l.* per mile for the half-year, or 1,800*l.* for the year, equal on the 449 miles of the Great Western to *more* than 800,000*l.*, or, deducting 40 per cent. for working expenses, equal to 6 per cent. on its ordinary share capital of 8,000,000*l.*

Again, the Goods Receipts per mile of the Great Western were, for the half-year ending June, 1847, *before* the Haydon Square Station

of the London and North Western Railway was opened, only 415*l.* less than those of the London and North Western; and for the half-year ending June, 1857, *after* the station at Haydon Square was opened, they were 680*l.* less, making a difference against the Great Western of 265*l.* per mile for the half-year, or 530*l.* per mile for the year, equal, on the 449 miles of the Great Western, to 238,000*l.*, or, deducting working expenses, to a further $1\frac{1}{2}$ per cent. on the ordinary share capital of that company.

There does not appear to be anything in the circumstances of the Great Western Company, if we consider the natural sources of traffic which its district presents and its comparative freedom from competition, to account for these results, except the remoteness of its Paddington Station from the haunts of commerce, and its necessary incompatibility with the development of Suburban traffic—a traffic the most profitable of any to which the railway system is adapted.

To assume that, if the Great Western Railway were extended to a station as convenient for the London passengers as the London Bridge Station, its Passenger Receipts would be increased to the extent of 800,000*l.* per annum, or that a city depôt would add 238,000*l.* per annum to its Goods Receipts, may, perhaps, be considered extravagant; and yet there might be adduced, as many good reasons, why, with these facilities, it should attain an addition to its receipts exceeding this 1,038,000*l.*, as can be suggested for their falling short of that sum.

VI.—*Conclusion.—Proposed Remedies.*

And now, having stated why we think that the public, apart from the immediate proprietors, have an abiding interest in the commercial prosperity of the railway system, and having endeavoured to explain, I am afraid at too great length, the chief, if not the only cause to which, as we think, the want of this prosperity in the case of the Great Western Railway is attributable, I am glad to be able to present to you, with some confidence, what we believe to be the remedy of this evil. This remedy, we presume, will be found, not in paring down the conveniences of the public, but in a large increase to these conveniences by the construction of a new line of railway.

This new railway is proposed to commence at Paddington by a junction with the Great Western Railway, and to terminate at St. Martin's-le-Grand, opposite the Post-Office—a point for the City passengers more convenient even than London Bridge; whilst, for those in the central portions of the metropolis, there would be stations at Clerkenwell, King's Cross, Tottenham-court Road, Baker Street, &c. There can be no question, therefore, that this railway

would convert the Great Western from the least convenient to the most convenient railway for the London passengers. A depôt for goods at Farringdon Street would be nearer to the large warehousemen in St. Paul's Churchyard, Cheapside, Wood Street, &c.; and more convenient for the general trade of London than the depôt at Haydon Square; whilst a coal depôt at Clerkenwell would be far more central for the coal trade than that possessed by the Great Northern Company at Maiden-lane.

But this, which is called the "Metropolitan Railway," presents other advantages to the general public.

It will not only afford ready and cheap access between the north-western and south-eastern parts of the metropolis, but it will relieve the streets of London from a large portion of that goods traffic which has of late years become so great a nuisance.

The Act for this railway was obtained some four years since with the almost universal consent of all parties: it possesses peculiar powers: it passes through the greater portion of its length without invading property of house or land, and can be constructed, therefore, at proportionately small cost. Why it has not been constructed already is easy of explanation—it may suffice to the present Company to know that a last effort is now being made for its completion.

TABLE I.

METROPOLITAN RAILWAYS.—Comparison of the First Six Months of 1847 and 1857 as regards Mileage Results.

PASSENGER RECEIPTS Per Mile for Half-year ending June, 1847.		PASSENGER RECEIPTS Per Mile for Half Year ending June, 1857.	
	£		£
<i>Great Western</i>	1,820	Brighton	1,450 Inc. 245
London and North-Western	1,770	South-Eastern	1,220 „ 85
Brighton	1,205	London and N. Westn.	1,210 Dec. 560
South-Western	1,145	<i>Great Western</i>	1,070 „ 750
South-Eastern	1,135	South-Western	1,050 „ 95
Eastern Counties	745	Eastern Counties	605 „ 140
GOODS RECEIPTS Per Mile for Half Year ending June, 1847.		GOODS RECEIPTS Per Mile for Half Year ending June, 1857.	
	£		£
London and North-Western	900	London and N. Westn.	1,235 Inc. 335
<i>Great Western</i>	485	Eastern Counties	705 „ 280
Eastern Counties	425	<i>Great Western</i>	575 „ 90
South-Western	320	South-Western	380 „ 60
South-Eastern	230	Brighton	370 „ 155
Brighton	215	South-Eastern	340 „ 110

TABLE II.

METROPOLITAN RAILWAYS.—Mileage, Passengers, and Goods for Half-Years ended June 1847, 1852, and 1857.

1	2	3	4	5	6	7	8
	Mileage.	Total Receipts from Passengers.	Receipts Per Mile.	Total Receipts for Goods, &c.	Receipts Per Mile.	Total Goods and Passengers Per Mile.	Dividend Per Cent. Per Annum.
	No.	£	£	£	£	£	£ s. d.
South-Western. 1847	131	150,000	1,145	42,000	320	1,465	3 15 -
„ 1852	242	214,000	885	67,000	275	1,160	1 12 6
„ 1857	277	290,000	1,050	10,500	380	1,430	2 7 6
Brighton 1847	121	146,000	1,205	26,000	215	1,430	2 - -
„ 1852	174	185,000	1,060	52,000	300	1,360	1 12 -
„ 1857	184	267,000	1,450	68,000	370	1,820	2 10 -
South-Eastern 1847	150	170,000	1,135	35,000	230	1,365	2 2 -
„ 1852	275	278,000	1,010	60,000	220	1,230	1 5 -
„ 1857	301	367,000	1,220	102,000	340	1,560	1 10 -
Eastn. Counties 1847	244	184,000	745	104,000	425	1,180	2 10 -
„ 1852	417	231,000	555	207,000	495	1,050	1 - -
„ 1857	489	296,000	605	345,000	705	1,310	1 5 -
Lond. & N. W. 1847	378	670,000	1,770	340,000	900	2,670	4 10 -
„ 1852	540	669,000	1,240	467,500	865	2,105	2 15 -
„ 1857	637	770,000	1,210	787,000	1,235	2,445	2 10 -
Great Western 1847	165	300,000	1,820	80,000	485	2,305	4 - -
„ 1852	263	315,000	1,200	124,000	470	1,670	2 - -
„ 1857	449	480,000	1,070	258,000	575	1,645	- 10 -

TABLE III.

METROPOLITAN RAILWAYS.—Effects on Goods Traffic of Central Depôts.

<i>Blackwall Railway.</i> —Receipts 32 weeks preceding extension	£ 17,314
Extension to Fenchurch Street, 1841.	
Receipts 32 weeks after extension	25,318
Increase 50 per Cent.	8,004

South-Eastern.

	Miles Open.	£
Goods Receipts, 6 months ending March, 1844	82	8,950
Extension to Bricklayer's Arms, 1844.		
„ 6 months ending March, 1845	98	16,546
(20 p. ct.) 16 (84 p. ct.)		7,546

TABLE III.—*Continued.**Great Western.*

	Miles Open.	£
Goods Receipts, 6 months ending December, 1843.....	190	64,300
„ „ „ 1844.....	221	83,400
	(16 p. ct.) 31 (30 p. ct.)	<u>19,100</u>

South-Western.

	Miles Open.	£
Passenger Receipts, 6 months ending June, 1847	194	363,215
Extension to Waterloo, 1848.		
„ 6 months ending June, 1849	210	419,725
	(9½ p. ct.) 16 (18 p. ct.)	<u>56,510</u>

Great Western.

	Miles Open.	£
Passenger Receipts, 6 months ending June, 1847	264	698,628
„ „ „ 1849	306	716,090
	(16 p. ct.) 42 (2½ p. ct.)	<u>17,462</u>

London and North-Western.

	£
Goods Receipts, 12 months ending June, 1851	931,461
„ „ „ 1852 (nearly same Mileage)	946,472
Increase over 1851	<u>15,011</u>

Haydon Square opened about June, 1852.

„ 12 months ending June, 1853	1,085,630
Increase over 1852	139,158
Increase of one year over the other	124,000

On the Present State of the Administration of the Relief to the Poor in the Metropolis, and the Charge of the Poor Rate thereon. By W. G. LUMLEY, LL.B., Barrister-at-Law, Assistant Secretary of the Poor Law Board, and one of the Honorary Secretaries of the Statistical Society.

[Read before the Statistical Society of London, 20th April, 1858.]

CONTENTS:

	PAGE		PAGE
I.—Description of the Metropolis	169	VI.—Division of the Metropolis into Portions	187
II.—Provision for the Management of the Relief to the Poor in Parishes	172	VII.—Incidence of the Charge upon the several portions with reference to Population	188
III.—Formation of Unions and Boards of Guardians	175	VIII.—Incidence of the Charge with reference to Property	190
IV.—Provisions made for the Distribution of Relief and Collection of the Poor Rate	180	IX.—Incidence of the Charge in respect to the numbers of Paupers	193
V.—Progress of the Charge for the Relief of the Poor	184	X.—Concluding Remarks	195

I.—Description of the Metropolis.

It is proposed to collect together information respecting the Administration of the Relief of the Poor in the Metropolis, the Imposition and the Collection of the Poor Rate in that district.

The Metropolis is a term very indefinite, but it is deemed most convenient to adopt that extent which is locally comprised within the operation of the late Act for the Management of the Metropolis.—18 & 19 Vict., c. 120. For a more complete account of the Metropolis and its boundaries, the valuable papers drawn up by the late Mr. Fletcher, and printed in the seventh volume of the Society's *Journal* (p. 69-103) should be consulted.

This District comprises parts of three counties, namely, Kent, Middlesex, and Surrey, but omits, for reasons not necessary here to be considered, the whole of the space which constitutes the area of the City of London. This space must, however, be included in the present inquiry.

The Parishes and other places to which that Act applies are as follows:—

In Kent.

Woolwich
St. Paul, Deptford
St. Nicholas, Deptford
Greenwich
Charlton
Plumstead

Eltham
Lee
Kidbrooke
Lewisham
Penge

In Middlesex.

St. George, Hanover Square	St. Mary-le-Strand
Islington	St. Luke
St. Marylebone	St. George-in-the-East
St. Pancras	St. Martin-in-the-Fields
Shoreditch	The Hamlet of Mile End Old Town
Paddington	Mile End New Town
Bethnal Green	Hampstead
St. James, Westminster	St. Mary, Whitechapel
Clerkenwell	Christchurch, Spitalfields
Chelsea	St. Botolph Without, Aldgate
Kensington	Holy Trinity, Minories
St. Margaret and St. John	St. Katherine
Hackney	Norton Folgate
St. Mary, Stoke Newington	The Old Artillery Ground
St. Giles-in-the-Fields and St. George, Bloomabury	All Saints, Poplar
St. Andrew, Holborn-above-Bars	St. Mary, Stratford-le-Bow
St. George the Martyr	St. Clement Danes
St. Sepulchre	The Liberty of the Rolls
Saffron Hill, Ely Rents	Hammersmith
Glasshouse Yard Liberty	Fulham
St. Ann, Soho	St. Ann, Limehouse
St. Paul, Covent Garden	St. John, Wapping
Savoy Precinct	St. Paul, Shadwell
	The Hamlet of Ratcliffe

In Surrey.

Lambeth	St. Thomas, Southwark
St. Mary, Newington	St. John, Horsleydown
Camberwell	Clapham
St. George the Martyr, Southwark	Tooting Graveney
Bermondsey	Streatham
Rotherhithe	Battersea
Christchurch, Surrey	Wandsworth
St. Saviour's	Putney
St. Olave	

The City of London, and what are termed the Liberties thereof, comprise 108 parishes and places, the names of which will appear in those tables hereafter, which give the lists of the City of London, East London, and West London Unions.

In the year 1803 the Metropolis, according to the Parliamentary Returns relating to the Poor collected for that year, comprised the City of London within and without the walls; the City of Westminster; the Borough of Southwark; certain parishes in the counties of Middlesex and Surrey, which were described as within the Bills of Mortality; and five parishes, namely, Marylebone, St. Pancras, Kensington, Chelsea, and Paddington, which were not within the Bills of Mortality.

The present metropolitan area is increased by the Fulham, Green-

wich, Lewisham, and Wandsworth, and Clapham Unions, which will be described hereafter; and by the parish of Camberwell.

The various places which have been enumerated above bear different names. They are termed Parishes, Hamlets, Liberties, and Precincts. The number of these several places is as follows:—

Parishes.	Hamlets.	Liberties.	Precincts.	Township.
168	6	4	5	1

There are also four parishes which are divided for ecclesiastical and certain other purposes, but are united for the relief of the Poor. They are *St. James and St. John, Clerkenwell*, united by 15 Geo. III, c. 23; *St. Margaret and St. John the Evangelist, Westminster*, united by 25 Geo. II, c. 23; *St. Giles-in-the-Fields and St. George, Bloomsbury*, united by the 14 Geo. III, c. 62; and *St. Andrew, Holborn-above-Bars, and St. George the Martyr*, united for the relief of the poor by the 6 Geo. III, c. 100.

After the fire of London, many of the parishes in the City of London were united by the statute 22 & 23 Charles II, c. 11, for ecclesiastical purposes only, and the number was reduced to 51. The old parishes were, however, expressly reserved for civil purposes. Since then *St. Michael, Crooked-lane*, has been united to *St. Magnus and St. Margaret* by the statute 1 Wm. IV, c. 3; *St. Margaret, Lothbury, St. Christopher-le-Stock, and St. Bartholomew, Exchange*, have been united by statute 2 & 3 Vict., c. 107; *St. Bennet Fink and St. Peter-le-Poor*, are also united by statute 5 & 6 Vict., c. 1. These unions have been made for ecclesiastical purposes only.

The following parishes are united by long usage for the maintenance of their poor:—*St. Anne and St. Agnes within Aldersgate; St. Olave, Hart-street, with St. Nicholas-in-the-Shambles; St. Lawrence Jewry with St. Mary Magdalen, Milk-street; and formerly St. Antholin* was united with *St. John the Baptist, near Dowgate*.

Within the district above described as the present metropolis, there are certain places which were termed extra-parochial, and until the Act of the last year (20 Vict., c. 19) were not liable to the maintenance of the poor, and consequently heretofore were exempt from the payment of the Poor-rate. They are as follows:—

The Close of Westminster Abbey
The Charter House
Inner Temple
Middle Temple
Part of Lincoln's Inn
Part of Gray's Inn

Staple Inn
Furnival's Inn
Serjeant's Inn, Fleet Street
Thavie's Inn
Barnard's Inn
The Tower of London

These extra-parochial places altogether would complete an area of about 62 acres.

The whole of the district, therefore, which is comprised within the metropolis thus described presents a figure of an oval form, of which the river Thames is, as it may be said, the long axis, though the extent of the district, in regard to population and dwellings, is greatest on the northern bank. The measurement of the boundary line is about 63 miles. The Report on the last Census gives the Acreage of every place which made separate returns for population, and the total acreage of the metropolis, including the extra-parochial places, is 78,029 acres, amounting to about 120 square miles. This acreage includes that part of the river Thames which is comprised in the metropolis, which is estimated at 2,778 acres, or four square miles.

II.—*Provision for the Management of the Relief to the Poor in Parishes.*

By the statute 43 Eliz., c. 2, every parish was rendered liable to provide for and maintain its poor and destitute inhabitants, provision being contained in the Act, whereby a parish, too poor to maintain its paupers, might obtain assistance from its adjoining and neighbouring parishes. The parish is an Ecclesiastical District, the origin whereof can seldom if ever be traced; being the district which was subject to the spiritual care of a rector. The numerous parishes, at the passing of that statute, differed in size. In some instances they were very small, but in others very extensive, embracing wide districts of thinly-peopled country.

As these wide districts became more populous, the difficulty of administering relief to the poor in such parishes became apparent, and consequently a remedy was required. Hence the statute 18 & 14 Charles II, c. 12, was passed, which enabled overseers to be appointed for townships and villages in any case where, by reason of the largeness of the parish, the inhabitants could not reap the benefit of the Statute 43 Elizabeth. Thenceforth the relief of the poor, which had been a charge coterminous with the parish, became more limited where it could be shown to the satisfaction of the justices of the district that, by reason of the size of the parish, the relief of the poor could not be properly administered therein. Then a Township was severed from the parish, and the like process was continued from time to time until many an ancient parish has been subdivided into a very large number of smaller districts. The Judges of the Superior Courts of Law held that, when one township had been severed from a parish, any other township might, as a matter of right, insist upon being so severed. Oftentimes a thinly-peopled township thus relieved itself from the burthen of contributing to the maintenance of the poor of its populous fellow-parishioners. This proceeding was put

an end to by the 7 & 8 Vict., c. 101, in 1844, which prohibited the justices from appointing overseers in future for *Townships* for which such officers had not been previously appointed.

The statute of Charles II was, doubtless, acted upon in the metropolis in many of the instances in which overseers are found to be acting in the relief of the poor for the places which are not *parishes*, or which have been formed into parishes in modern times.

But there are several subdivisions of parishes in the metropolis where the separation has been effected by special local Acts of Parliament. In some cases there had been a separation for the maintenance of the poor of parts of the parish under the statute 13 & 14 Charles II, c. 12, and new parishes were created for Ecclesiastical purposes only. In others the severance was made for all purposes.

The following is a list :—

By the 22 & 23 Charles II, c. 2, Christchurch, Surrey, was created out of the parish of St. Saviour's.

By the 12 & 13 Charles II, c. 37, St. Paul, Covent Garden, and by the 1 James II, c. 22, St. James, Westminster, and in 1725 St. George's, Hanover Square, were separated from the parish of St. Martin-in-the-Fields.

By the 6 Geo. II, c. 11, the parish of St. John, Horsleydown, was formed out of the parish of St. Olave, Southwark.

In 1720 the parish of Deptford was divided into the two parishes of St. Nicholas and St. Paul.

But the greatest change has been made in the ancient parish of St. Dunstan, Stepney. It is stated that the parish of St. Mary, Whitechapel, was anciently part of it, though the severance took place in the beginning of the 17th century.

By the 22 Charles II, c. 14, St. Paul, Shadwell, was carved out of it. By the 5 & 6 Wm. and Mary, c. 20, the parish of St. John, Wapping; by the 2 Geo. II, c. 10, Christchurch, Spitalfields; by the 2 Geo. II, c. 30, the parish of St. George in the East; by the 3 Geo. II, c. 17, Limehouse and part of Ratcliffe, now forming the parish of St. Anne, Limehouse; by the 16 Geo. II, c. 20, the parish of Bethnal Green; and by the 57 Geo. III, c. 34, the Hamlets of Poplar and Blackwall, forming the parish of All Saints, Poplar, were all severed from the original parish of Stepney. It appears by the Statute 10 Geo. IV, c. 7, that the parish of Stratford-le-Bow was separated from it in 1717, under the operation of the 10 Ann., c. 11, and the 1 Geo. I, c. 23.

It is here convenient to introduce the history of the system which had been established in the City of London for the relief of the poor at the time of the Commonwealth.

An ordinance of Parliament, passed on the 17th of December, 1647, created a Corporation for the Management of the Poor in the *City of London and its Liberties*, but did not make any special provision for the City of Westminster. This was amended by an Act in 1649, but was still confined to the *City of London and its Liberties*.

No authentic account appears to exist as to what was done by the authorities of the City under this ordinance, though it would seem, from one of the clauses of the following statute, that some

steps were taken for carrying it into operation. But the above-mentioned Act, 13 & 14 Charles II, c. 12, which founded the modern Law of Settlement and Removal of the Poor, also contained a special provision for the Metropolis. Without noticing the Acts of the Commonwealth, it provided in the fourth and subsequent sections for the establishment of a Corporation or Corporations, Workhouse or Workhouses, within the cities of London and Westminster, and within the boroughs, towns, and places of the counties of Middlesex and Surrey situate within the parishes mentioned in the weekly Bills of Mortality. One Corporation was to be established for the City of London, another for the City of Westminster, and the Justices of the Peace for the counties of Middlesex and Surrey, respectively, were required to appoint the Corporation for the places in those counties not comprised in the City of London.

These Corporations were empowered to manage and relieve the poor within their respective districts, and the Act provided for the raising of the requisite funds for their expenditure in the following manner:—

“The Common Council of the City of London, the Burgesses of the City of Westminster, and the Justices of Peace for the said cities and counties, in their Quarter Sessions, were to set down and ascertain a competent sum for these purposes, not exceeding one year’s rate, from time to time usually set upon any person for or towards the relief of the poor, and the same to apportion on and upon the several wards, precincts, counties, divisions, hundreds, and divisions *as they shall think fit*; and thereupon the Aldermen, Deputies, and Common Councilmen of every Ward of the City of London, and Burgesses, and Justices of the Peace of the City of Westminster and the Liberties thereof, and the Justices of the Peace of the said counties of Middlesex and Surrey, shall have power and authority equally and indifferently, according to the proportions appointed as aforesaid for the several wards, &c., to tax and rate the several inhabitants within the said respective wards, precincts, and parishes as well within Liberties as without.”

By section 8 the Churchwardens and Overseers of the several parishes were empowered to recover this tax from the persons assessed.

The last clause of the statute which contained this provision enacted that, as to all the matters contained therein (excepting what relates unto the corporations mentioned and constituted thereby), it should continue until May 29, 1665, and the end of the first Session of Parliament then next ensuing. By the 1 James II, c. 17, 18 & 14 Charles II, c. 17 (except what relates unto the Corporation), was continued for seven years.

The Plague and the subsequent Fire of London, and the unsettled state of the country, appear to have prevented the Corporation of the City of London from acting upon these statutory

powers until 1698, when the Corporation thereby contemplated was established for that City. In 1699 the Corporate body so established took a house in Bishopsgate-street, and set up a species of workhouse, wherein certain classes of poor persons were received and maintained. It was continued for several years, being in existence until 1829; and was supported originally at the cost of the citizens. It was, however, for many years used as an auxiliary workhouse for the several parishes comprised in the City, who had still to maintain their other poor,* and seems to have ultimately become a simple charitable institution. By an Act passed in the 10 Geo. IV, c. 43, which recited the statute of Charles II, the purchase of the premises, three several endowments by deceased charitable persons, and that it had become unnecessary, for the purpose for which it was established, the same was authorized to be sold, and the produce of the sale applied to particular charitable objects.

It is not shown that anything was done in the City of Westminster or in the other parishes within the Bills of Mortality.

III.—*Formation of Unions and Boards of Guardians.*

The relief of the poor continued to be provided for in the separate parishes in the metropolis as in the rest of the kingdom, except where alterations were effected by the special Acts of Parliament, already referred to, until the year 1834, when the Poor Law Amendment Act, 4 and 5 Will. IV, c. 76, was passed. As that statute enabled the Poor Law Commissioners to combine parishes together to form Unions for the relief of the poor, as and when they might deem it expedient, they proceeded to deal with the parishes in the metropolis accordingly. In the years 1835-6 they formed *two* Unions in Middlesex, one the *Holborn Union*, comprising two separate parishes, the other the *Strand Union*, comprising five; and three Unions in *Surrey*, viz., the *St. Olave Union*, comprising three parishes; the *St. Saviour's Union*, comprising two parishes; and the *Wandsworth and Clapham Unions*, comprising six parishes. In 1836 and 1837 two Unions were formed in *Kent*, viz.:—The *Greenwich Union*, comprising four parishes; and the *Lewisham Union*, comprising seven. In Middlesex seven Unions were formed, viz.:—The *Hackney Union*, comprising two parishes; the *Poplar Union*, comprising three; the *Stepney Union*, comprising five; the *Whitechapel Union*, comprising nine; the *City of London Union*, which contains the great number of 98, and the *West and East London Unions*, comprising respectively seven and four parishes; these latter Unions being situated in what are termed the Liberties of the City of London. Another parish, also situated in one of the Liberties, has since been added to the *Holborn Union*.

* See an account of this establishment in the "Account of the Workhouses in Great Britain in the year 1731," of which the third edition was published in 1786.

In 1837, the Commissioners formed the *Kensington Union*, comprising five parishes; but three, viz., Chelsea, Paddington, and Kensington, have since been taken away and maintain their poor separately. The other two, however, namely, Fulham and Hammer-smith, remain united under the title of the *Fulham Union*.

The Commissioners had the power of assigning to every component member of the Union the number of Guardians to be elected for it; but the statute created every Justice of the Peace acting for the county and residing within the Union an *ex-officio* Guardian thereof.

The number of Elected and *ex-officio* Guardians of every Union is now as follows :—

Name of the Union.	Number of Elected Guardians.	Number of <i>Ex-officio</i> Guardians.
Greenwich	24	....
Lewisham	20	6
Fulham	17	4
Hackney	11	1
Holborn	28	3
City of London	101	....
East London	21	....
West London	20	....
Poplar	15	2
Stepney	15	....
Strand	30	2
Whitechapel	27	....
St. Olave	15	3
St. Saviour	17	....
Wandsworth and Clapham	20	17
Total	381	38

It thus appears that in the metropolis there are at this time fifteen Unions, containing 160 parishes and subdivisions of parishes, wherein the relief of the poor is administered by Boards of Guardians representing the several parishes contained in those Unions.

The Poor Law Amendment Act also empowered the Commissioners to establish a Board of Guardians in any parish which they might not unite with others, but it was held by the Court of Queen's Bench, in the case of St. Pancras, that this power did not extend to any parish wherein, by virtue of any Local Act, there already existed a Board of Guardians for managing the poor.

The Commissioners have exercised this power by directing Boards of Guardians to be constituted in the following parishes, twelve in all :*—

* In the last year the Poor Law Board separated the Hamlet of *Mile End Old Town* from the Stepney Union, and placed it under a separate Board of Guardians. But in this paper it is treated as forming part of the Union in which it was comprised,

Name of Parish.	Number of Guardians.	
	Elected.	<i>Ex-officio.</i>
Bethnal Green	20	1
Chelsea	20	4
George, St., in the East.....	18	1
Hampstead*	11	4
Kensington	18	11
Martin, St., in the Fields	24	4
Paddington	18	12
Bermondsey	18	3
Camberwell	18	3
George, St., Southwark	18	....
Lambeth	20	7
Rotherhithe	15	....
The Total Number of Guardians is	218	50

And adding those for Unions, the aggregate is 599 Elected and 88 *Ex-officio* Guardians.

The parishes which are governed by Local Acts, in which no such Board has been constituted by the Commissioners, are eleven, namely:—

Clerkenwell
George, St., Hanover Square
Giles, St., and St. George, Blooms-
bury
Islington
James, St., Westminster

Luke's, St., Middlesex
Margaret, St., and St. John
Marylebone, St.
Pancras, St.
Shoreditch
Newington, St. Mary

The governing bodies of these several parishes which have the management of the poor are very various.

In *Clerkenwell* the poor are relieved by 63 elected Guardians and 8 *ex-officio*, consisting of 2 Ministers, 2 Churchwardens, and 4 Overseers.

In *St. George's, Hanover-square*, there are 20 elected Governors and Directors; the Rector, Churchwardens, and Overseers, in all 6, are *ex-officio* Governors and Directors. The total number is 26.

In *St. Giles and St. George's, Bloomsbury*, the poor are relieved by 24 elected Directors and 6 *ex-officio*, consisting of 2 Rectors and 4 Churchwardens, that is 30 altogether. But the Vestry appoint the officers, and, under the 18 & 19 Vict. c. 120, the number of Vestrymen is 50.

In *St. Mary, Islington*, there are 60 Trustees, who are elected triennially, and the Vicar, 3 Churchwardens and 3 Overseers are *ex-officio* Trustees, in all 67, to manage the poor. The Vestry, consisting of 124, make the Poor-rate.

* The parish of Hampstead was originally included in the Edmonton Union, but was separated from it in the year 1848.

In *St. James, Westminster*, there are 20 elected Directors, 1 Rector, 2 Churchwardens, and 4 Overseers; 7 *ex-officio* Directors, in all 27.

In *St. Luke, Middlessex*, there are 48 elected Guardians; the Rector, 2 Churchwardens, and 6 Overseers are *ex-officio* Guardians, in all 57. The Vestry make the Poor-rate, being in number 51.

In *St. Margaret and St. John, Westminster*, there are 50 elected Governors and Directors, 4 Churchwardens, and 4 Overseers, altogether 58.

In *St. Marylebone* there are 30 elected Directors and Guardians, and 1 Rector and 2 Churchwardens, *ex-officio*—33 in all. But the Vestry have some powers in the administration of relief, and their number, including *ex officio* officers, is 126.

In *St. Pancras* there are 36 Governors and Directors elected; the Vicar and 2 Churchwardens, *ex-officio*, in all 39. While the Vestry, who make the Poor-rate and appoint the officers for the management of the poor, including *ex officio* officers, amount to 123.

In *Shoreditch* there are 77 Trustees who are elected, 17 others entitled by a property qualification; and the Vicar, 2 Churchwardens, and 6 Overseers are *ex-officio Trustees*; total 103. In this parish the Vestry, who make the Poor-rate, including *ex-officio* officers, amount to 123.

In *St. Mary, Newington*, there are 32 elected Guardians, while the Rector, 2 Churchwardens, and 4 Overseers, and such Justices as reside within the parish, are *ex-officio* Guardians.

The total number of the Guardians, Trustees, Governors, or Directors is 477 elected, and 70 *ex-officio*; and if this number be added to the Guardians acting under the 4 & 5 Wm. IV, c. 76, the total number will be 1076 elected, and 158 *ex-officio* Guardians, who gratuitously act in administering the relief to the poor in the metropolis.

It will be found that in the metropolis sixty-three parishes have up to the present time obtained Local Acts, which more or less have affected the administration of the relief of the poor or the collection of the Poor-rate. Every place which has so obtained a Local Act is marked in the Table B. with an asterisk. Many of the places are comprised in the Unions above referred to, and the powers conferred upon the authorities established by those Acts for the management of the poor, have been superseded by the provisions contained in the General Statute for the Relief of the Poor, though the other powers conferred upon them remain unaltered, except where they have passed to the vestries elected under the Metropolis Local Management Act.

In addition to their power of forming Unions for the general relief of the poor, the Poor Law Commissioners, by the statute 7 & 8 Vict. c. 101, s. 40, obtained an authority to form combinations of unions and parishes into districts for the support and maintenance

of pauper children of certain classes. Acting upon this authority, they formed three Metropolitan Pauper School Districts, with the names of—*The Central London School District; The North Surrey School District; and The South Metropolitan School District.* These districts are managed by Boards of Management, of which the members are partly *ex-officio* and partly elected. The Chairman of every union or parish which forms an integral part of the district is an *ex-officio* Member of the Board. The elected Managers are a certain number assigned by the Poor Law Commissioners at the formation of the district to each union or parish by the Guardians whereof they are elected.

The following Table shows the number of Unions and Parishes combined with the number of *ex-officio* and elected Guardians:—

Pauper School District.	Names of the Unions and Separate Parishes combined.	Number of Parishes.	Number of <i>Ex-officio</i> Managers.	Number of Elected Managers.	Total.
Central London	City of London Union	98	1	6	7
	East London „	4	1	4	5
	West London „	7	1	4	5
	St. Saviour's „	2	1	2	3
	St. Martin-in-the-Fields..	1	1	2	3
		112	5	18	23
South Metropolitan	Greenwich Union	4	1	5	6
	St. Olave's „	3	1	2	3
	Bermondsey Parish	1	1	3	4
	Camberwell	1	1	2	3
	St. Mary, Newington	1	1	4	5
	Rotherhithe	1	1	1	2
		11	6	17	23
North Surrey.....	Chelsea	1	1	3	4
	Lewisham Union	7	1	1	2
	Wandsworth and Clapham	6	1	3	4
		14	3	7	10
	Croydon*	11	1	2	3
	Kingston*	13	1	2	3
	Richmond*	5	1	1	2
		43	6	12	18

As regards the last three Unions, it is to be observed that, though closely adjoining the metropolis, they are not within the district now under consideration.

Pauper Lunatics, who are not proper to be left at large, are required, by the statutes applicable to them, to be removed by order

of Justices to Lunatic Asylums or to Hospitals registered for the reception of lunatics, or to Houses licensed for their reception.

In the recent Report of the Committee of the Statistical Society, on "Beneficent Institutions," p. 46, it is shown that the number of pauper lunatics maintained by the different unions and parishes in the Metropolitan District in these asylums and licensed houses on the 1st of January, 1855, was 3,154, at an annual cost of 79,988*l*. The number of this unfortunate class of paupers is yearly increasing.

IV.—*Provisions made for the Distribution of Relief and Collection of the Poor Rate.*

For the conduct of the business of every Union and Parish, under a Board of Guardians, there is one Clerk, and, in many cases, there is at least one Assistant to the Clerk. In every parish which acts under its own Local Act there is generally a Clerk to the Board of Guardians and a Clerk to the Vestry; and all the Unions and Parishes of the metropolis, with the exception of five of the latter, are included within some Audit District.

There are five Metropolitan Audit Districts:—

The London District	The South East Metropolitan District
The North East Metropolitan District	The South West "
The North West "	

which comprise forty-four Unions and Parishes, whereof, however, twelve Unions are not within the metropolis now under consideration.

There is to each School District a Clerk and a Treasurer, and it is also included within an Audit District. The Central London School District is in the London Audit District, the South Metropolitan is in the South-West Metropolitan Audit District, and the North Surrey is within the South-East Metropolitan; and the time occupied in the audit of the accounts of all these School Districts at Lady Day, 1857, was altogether eleven days—that is, three weeks for the year.

For every general Workhouse there are the following officers:—Master, Matron, Chaplain, Medical Officer, Schoolmaster, Schoolmistress, Nurse, and Porter. Some of the District Schools are not provided with all those officers, but all the Workhouses and District Schools have a considerable number of assistant officers and servants.

The relief of the Out-door Poor is provided for by *Relieving Officers*, who distribute the general relief to the destitute; by *Medical Officers*, who attend to the sick poor in districts which are for the most part strictly defined; and by *Superintendents of Out-door Labour*, who have to overlook the able-bodied poor when required to work for the relief which is supplied to them.

These officers are in many places supplied with assistants.

The Churchwardens and Overseers in parishes are enabled to give relief in cases of sudden and urgent necessity, but they do not

afford much aid, the great object of the Poor Law Amendment Act having been to remove them from the administration of relief.

The number of Officers, Assistants, and Servants in the different Unions and Parishes is as follows :—

Unions and Parishes.	Clerk and Assist- ants.	Trea- surer.	Workhouses.		Out-door Relief.		Superin- tendents of Out-door Labour.
			Officers.	Assistants and Servants.	Reliev- ing Officers.	Medical Officers.	
Greenwich Union	2	1	7	6	3	5	....
Lewisham „	1	1	5	1	2	6	....
Fulham Union.....	1	1	7	5	2	5	....
Kensington	1	1	6	2	2	3	....
Paddington	1	1	8	7	1	2	....
Chelsea	1	1	5	3	2	5	1
St. George, Hanover Sq.	1	1	12	4	1	4	....
St. Margaret and St. John	1	1	11	1	3	2	....
St. Martin-in-the-Fields	2	1	7	7	1	1	1
St. James, Westminster	1	1	10	2	3	1	....
Marylebone	2	1	8	19	6	6	1
Hampstead	1	1	4	....	1	1	....
St. Pancras	1	1	9	9	7	5	....
Islington	1	1	11	....	2	5	....
Holborn Union	1	1	8	4	2	3	....
St. Giles-in-the-Fields...	1	1	9	1	4	....	....
Strand Union	5	1	12	2	2	3	1
Clerkenwell	2	1	7	1	1	4	....
City of London Union....	4	1	5	14	3	4	....
London, West, „	2	1	5	2	2	2	1
St. Luke	1	1	6	1	1	4	....
London, East, Union	2	1	6	1	3	4	....
Shoreditch	2	1	15	28	4	6	2
Bethnal Green	1	1	7	6	2	5	....
Hackney Union	1	1	7	5	2	4	1
Whitechapel „	1	1	16	19	4	5	1
St. George-in-the-East..	1	1	13	9	3	4	....
Stepney Union	3	1	15	36	3	5	....
Poplar „	1	1	5	....	1	6	....
Bermondsey	1	1	6	1	3	3	....
Camberwell	1	1	5	....	3	5	1
St. George, Southwark...	1	1	7	....	3	3	....
Lambeth	3	1	12	9	6	10	1
St. Mary, Newington	2	1	5	5	2	6	1
St. Olave Union	1	1	6	....	2	1	....
Rotherhithe	1	1	5	9	2	2	....
St. Saviour's Union	1	1	6	....	3	2	1
Wandsworth and Clap- ham Union	2	1	6	1	4	7	....
	60	38	304	211	101	143	13

Total of the Officers, Servants, and Assistants, 870.

The three Pauper School Districts are provided with the following officers :—

Pauper School Districts.	Clerk.	Treasurer.	Officers for the School.	Assistant Officers and Servants.
Central London	1	1	7	66
The North Surrey	1	1	8	48
The South Metropolitan....	1	1	8	7
	3	3	23	121

The number of assistant officers and servants employed in these schools appears to be very large, but it must be remembered that, unlike the case of the workhouses, there are no pauper inmates who are competent to perform the household work, and the Poor Law Board discourage as much as possible the employment of paupers as servants in these schools.

For the reception of their In-door Poor every union and parish has one Workhouse, and the following sixteen places have more ; viz :—

Clerkenwell.....	2	St. Margaret and St. John	2
St. George, Hanover Square	2	Shoreditch	2
St. George-in-the-East	2	Stepney Union	3
St. Giles and St. George, Bloomsbury	2	Strand „	2
Hackney Union	2	Whitechapel Union	2
Islington.....	2	St. George the Martyr, Southwark....	3
St. James, Westminster.....	2	Lambeth.....	2
West London Union	2	St. Mary, Newington.....	2

The greater number of these additional Workhouses are separate establishments for children. There are also in several of the unions and parishes separate places for the reception of vagrants, or for the working of out-door paupers.

The total number of Workhouses now in the Metropolitan District is fifty-six, to which are to be added the schools for the three districts.

The Poor Law Commissioners have limited the numbers to be received in almost all these workhouses as well as in the schools, and the numbers which can be so received as thus limited, or according to the actual accommodation where no limit has yet been assigned, amounts to 30,091; while the three schools are limited to contain altogether 2,549. Thus in-door accommodation is provided for 32,640 paupers.

It appears that on the 1st July, 1857, there were 26,203 In-door Paupers, and on the 1st January, 1858 there were 30,698, a difference of 4,500.

The number assigned to each Union and Parish, as well as the District Schools, for the year 1857, is as follows:—

Metropolis Workhouse Accommodation, 1857.

Lewisham Union.....	300	St. Martin-in-the-Fields.....	533
Greenwich „	1,044	St. Marylebone	2,000
Bethnal Green	1,016	Paddington	642
Chelsea.....	519	St. Pancras	1,393
Clerkenwell	500	Poplar Union	584
Fulham Union.....	537	Shoreditch	1,230
St. George-in-the-East	1,250	Stepney Union	1,204
St. George, Hanover Square ...	700	Strand „	460
St. Giles and St. George.....	950	Whitechapel „	1,050
Hackney Union	655	Bermondsey	908
Hampstead	251	Camberwell	470
Holborn Union	710	St. George the Martyr.....	1,255
Islington	477	Lambeth	1,730
St. James	800	St. Mary, Newington	694
Kensington	453	St. Olave Union	537
London City Union	1,010	Rotherhithe	340
„ East „	788	St. Saviour's Union	388
„ West „	500	Wandsworth and Clapham	550
St. Luke	654		
St. Margaret and St. John.....	917	Total	30,091

Central London School	1,085
South Metropolitan District School	750
North Surrey District School	714

2,549

There are, however, a much larger number of poor who are relieved out of the workhouse, most of them permanently, but many only with a casual or occasional assistance. These vary with the seasons, being of course greater in number in the winter than in the summer. The number of Out-Door Poor relieved on the 1st of January, 1858, was 73,500; but on the 1st of July, 1857, it was only 63,700, so that there is a difference of nearly 10,000 persons between the summer and winter seasons.

These poor are sometimes only relieved by the supply of money, food, clothing, or medical aid and medicines. But in many cases the relief is given in return for labour, and the Boards of Guardians are engaged in finding different kinds of manual labour upon which the able-bodied male paupers may be employed, not with the view of obtaining a profitable return for the relief which is supplied, but to enable them to apply some test to the applicant to prove the genuineness of the distress, and to induce them to betake themselves to more profitable or less irksome occupation as soon as possible.

This renders it necessary for Boards of Guardians to set up and keep a staff of officers to act as Superintendents of Out-door Labour

or Taskmasters. This test, however, is seldom applied except to able-bodied males, and as this class of poor is not abundant except in the winter months, the tasks are not kept up during the whole of the year. The different kinds of employment resorted to in the metropolis are stone-breaking, oakum-picking, carpet-beating, and occasionally street-cleaning.

If the In-Door and Out-Door Paupers be taken together, and a mean average between the summer and the winter be taken, it will be seen that the present number of Paupers daily relieved is about 100,000, or 1 in 25 of the estimated present population of the metropolis.

The Poor-rate, which is the fund originally provided for the relief of the poor, but which has since been made to bear many other charges, was required by the statute of Elizabeth that created it to be assessed and collected by the Churchwardens and Overseers of the parish for which it is imposed. Those officers continue to assess it in all the metropolitan parishes where there is no Local Act making another provision, and in many cases where there is a Local Act it has not taken away from them the duty of so assessing it. But the levying and collecting the rate in all populous parishes is necessarily very onerous, and the Overseers have been aided in the performance of this duty by the appointment of Collectors of the Poor-rate, and in respect of their other duties by the appointment of Assistant Overseers and Vestry Clerks.

It would be unnecessarily tedious to set out in detail the number of those officers appointed to each parish. It appears, however, that there are at least 165 Collectors of Poor-rate and 32 Assistant Overseers engaged in the various parishes of the metropolis. There are also Vestry Clerks, Removing Officers, and Pass Masters, that is, persons engaged in the removal of Scotch and Irish paupers to their respective countries. But the exact number of these officers is not readily ascertained.

V.—Progress of the Charge for the Relief of the Poor.

Such being the provision made for the administration of the relief to the Poor in the Metropolis, it is proposed to investigate the result. This investigation leads to an inquiry (1) into the progress of the metropolitan charge in respect of this burthen; (2) its present extent, and (3) its peculiar incidence upon the different parts of the metropolis.

It must be remembered that the metropolis is remarkable for the great irregularity of its local districts. Some parishes are of very considerable area, others of very small extent. The largest, namely, Lewisham, contains 5,789 acres, nearly 9 square miles; while the least, namely, St. John the Evangelist, in the City of London, contains only four-fifths of an acre of land.

Several districts which two centuries back formed parishes of themselves have, either by operation of the statute 12 & 13 Charles II, c. 14, above referred to, or by means of special Acts of Parliament, become divided into separate parts which, under different names, form parishes for the relief of the poor, and in these cases the incidence of the charges which would have been uniform if the original district had continued entire, have become varied and unequal among the severed parts. Thus the parish of Stepney, in the early part of the seventeenth century, comprised what now forms Bethnal Green, St. George-in-the-East, Mile End Old Town and New Town, Christ Church Spittal Fields, Ratcliffe, Wapping, Poplar, St. Paul Shadwell, Limehouse, and Stratford-le-Bow.

But the City of London, which within its walls, to use the ancient phrase, contains 98 parishes, covering an area of only 484 acres, presents the greatest anomalies and the most extraordinary variations. In most of the ancient cities of the kingdom, where many small parishes were comprised within their walls, there has been a consolidation of them into one uniform district for the purpose of the relief of the poor, and the whole charge is borne by the city or town in common. Such is the case at Bristol, Exeter, Chester, Chichester, Oxford, Norwich, Canterbury, and Southampton.

The City of London, however, has never deemed it advisable to adopt this measure. Hence it will be seen, by one of the following tables, that in one parish the rate in the pound for the relief of the poor in 1852 was 1½*d.*, in another it was 4*s.* 10½*d.* It is obvious, also, that there must be a great waste of time and labour in the separate staff of gratuitous and paid officers required for so many parishes. This district, though extremely wealthy, is, nevertheless, less in extent, in population, and in the number of the poor, than many of the parishes of the metropolis which maintain their own poor separately. And none of the difficulties of administering relief, which embarrass the great subject of the equalization of the Metropolitan Poor-rate, would attach to any proposal for consolidating the parishes of the City of London for this purpose.

It is, however, necessary now to examine the charge for the relief of the poor upon the district, and first, as to the source of information.

The Legislature has interfered on four several occasions to obtain correct and complete returns from the overseers of parishes as to the relief of the poor and the expenditure thereon. The first was by the statute 16 Geo. III, c. 40, passed in 1776, which required the overseers to answer certain questions, among others, the amount of the Poor-rate levied in the year ending Easter, 1776, the amount thereof expended in the relief of the poor, and the number of poor who received constant relief during that year. The returns of the

answers were made to one of the Clerks of Parliament, and were afterwards arranged by a Committee of the House of Commons and published.

By the 26 Geo. III, c. 56, similar returns were required to be made for the three years ending at Easter, 1783, 1784, and 1785. These returns were collected and arranged by a Committee, who published the returns of the expenditure for those years, and also an average of the three years.

By the 43 Geo. III, c. 144, similar returns were required to be made for the year ending Lady Day, 1803, though in greater detail than on the previous occasions, and especially the rate in the pound of the assessment was required to be communicated. The returns were afterwards collected together and published with a Report of a Committee of the House of Commons upon them. In that Report the returns of the former years were compared together.

The last Act upon this subject was the 55 Geo. III, c. 47, passed in 1815, which required returns to be made for the years ending Lady Day, 1813, 1814, and 1815. This Act also required the Property Tax assessment to be returned for the year ending Lady Day, 1815. These returns were also arranged and published in 1818.

The House of Commons in 1819 issued an order to the overseers to make returns of a similar kind of the annual Poor-rate Expenditure to that House, and such orders were repeated in the following years. Committees were appointed to consider these returns, and they published annual reports which showed the expenditure in parishes until 1824.

Subsequent returns were collected and arranged by the late Mr. Rickman, a Clerk of the House of Commons, and published by that House annually from 1824 until the establishment of the Poor Law Commission in 1834. The Commissioners continued the inquiry, and in 1835 published an Appendix to their Second Report, which set forth the amount expended by every parish and place in the kingdom, for the Relief of the Poor, for the years 1830, 1831, 1832, 1833, and 1834, and they showed in that Appendix the value of every parish as assessed to the Property Tax in 1815. In an Appendix to their Fourth Annual Report, they showed the expenditure of all parishes for the average of three years prior to their being placed in Unions.

But since that time they have only shown in their Reports the statistics of the Poor-rate expenditure in Unions and in Counties.

Special returns have, however, been called for by Parliament during the interval from 1834 to the present time, which have required more minute details; and from all those sources the information which is embodied in the tables which follow has been drawn.

The Report of the Census Commissioners upon the last Census, and the following Parliamentary documents, 1848, No. 735; 1854, No. 509; 1855, No. 254; 1857, Nos. 77 and 95; and 1858, Nos. 81, 98, and 149; together with the above authorities, have, in addition to the above Legislative Returns, been consulted.

VI.—*Division of the Metropolis into Portions.*

Now, it seems to be most convenient to treat the Metropolis as divided into five portions:—One in Kent, three in Middlesex, and one in Surrey; and it will be seen that these divisions give very nearly equal parts.

THE KENTISH PORTION will comprise the Greenwich and Lewisham Unions, which contain 11 parishes.

THE MIDDLESEX PORTION may be subdivided into three parts, to be designated the Western, the Central, and the Eastern Portions.

Of these, *the Western* will comprise one Union, namely, the Fulham Union, containing two parishes:—and the parishes of Paddington; Kensington; Chelsea; St. George, Hanover-square; St. Margaret and St. John, Westminster; St. Martin-in-the-Fields; St. James, Westminster; St. Marylebone; and Hampstead—in all, 11 parishes.

The Central will comprise three Unions, viz., the Holborn, the Strand, the City of London, and the West-London Unions, containing 114 parishes:—and the separate parishes of St. Pancras; Islington; St. Giles and Bloomsbury; Clerkenwell; and St. Luke—in all, 119 parishes.

The Eastern will comprise the East London, Hackney, Poplar, Stepney, and Whitechapel Unions, containing 23 parishes:—and the parishes of Bethnal Green; St. George-in-the-East; and Shore-ditch—in all, 26 parishes.

THE SURREY PORTION comprises three Unions, St. Olave, St. Saviour's and Wandsworth and Clapham Unions, containing 11 parishes:—and the parishes of Bermondsey; Camberwell; St. George, Southwark; Lambeth; St. Mary, Newington; and Rotherhithe—in all, 17 parishes.

The tables which are contained in the Appendix have been drawn up in accordance with these divisions, and have been compiled principally from the Parliamentary Returns above referred to, and from returns presented to Parliament since the establishment of the Poor Law Commission. A few details have been obtained from other authentic sources.

There is, doubtless, much dissimilarity in the character of the inhabitants of these different divisions, though they gradually intermingle. In the West, is the seat of Government, the Court, the dwellings of the nobility and gentry, with the residences of the

tradesmen of the upper classes. In the Centre, are the dwellings of the middling classes, the shops of general business, the banks, the warehouses and the counting-houses of merchants, of wholesale dealers, the chambers of lawyers, and the great mass of commercial buildings. In the East, are the docks and the vast depôts of shipping, and the outward trade of the metropolis, with some branches of the peculiar trades of London.

The Southern part, as it runs along that bank of the river, contains a collection of wharves, storehouses, granaries, and a large accumulation of buildings appropriated to various manufacturing processes. Ship-building and dockyards are also found in this portion, while, as it spreads away from the river into the country, the district is occupied by the dwellings of the persons who are daily occupied in the busy employments of the central, eastern, and western parts of the metropolis. But on all sides, as this metropolis extends into the country, it is found that the dwellings on the boundaries are, for the most part, the residences of those persons who are compelled to live in London, but seek as much as possible to obtain the advantages of a country life, and the shops of the tradesmen required by such inhabitants. In some parts of the line the poorer classes, being, as it were, pressed out of London, congregate in masses and represent occasionally a distressed population. This is not generally the case. The poverty and pauperism of the metropolis is, for the most part, within it. The careful comparison of the information supplied by the former returns and that now obtained will show how much this pauperism has fluctuated during the last half century. The clearance effected by the opening of thoroughfares and making of new streets may be properly considered in reference to that fluctuation, but it will be found to have had only a very slight and scarcely a perceptible effect in regard to the incidence of the Poor-rate. The great reduction of the rate in several parishes has proceeded more from the increase in the number or the expenditure of capital upon the buildings in them than from the demolition of poor dwellings.

VII.—*Incidence of the Charge upon the several Portions with reference to Population.*

To proceed now to more statistical details.

In 1776 the total cost of the relief of the Poor in England and Wales was 1,529,780*l.*; the average of the three years 1783-4-5 was 2,004,238*l.* In 1803 the total cost was 4,267,965*l.*; and in 1856 it was 6,004,244*l.*

The amount of this charge upon the metropolis in 1776 was 150,944*l.*:—the average of the charge for the three years 1783-4-5 was 212,106*l.*:—and the cost for 1803, 408,392*l.* While for 1856 it was

858,690*l.* Thus it is shown that there was an increase in 80 years of 700,000*l.* per annum.

Now, it appears that the *Sums Expended* in these different periods were as follows :—

District.	In 1776.	In 1783-4-5.	In 1803.	In 1856.	Rate of Increase between 1803 and 1856.
	£	£	£	£	Per Cent.
Kentish Portion	6,734	8,778	16,823	39,679	136
Midx.—Western	44,608	55,181	106,302	210,224	98
„ Central	44,281	78,079	150,087	233,047	55
„ Eastern	41,335	42,303	66,226	187,782	188
Surrey Portion	22,009	27,765	69,956	182,958	161

In these districts, however, the Population has increased from 958,863, in 1801, to 2,362,236, in 1851, in the following manner :—

District.	In 1801.	In 1851.	Rate of Increase
			Per Cent.
Kentish Portion	50,503	134,200	165
Midx.—Western	226,616	546,109	141
„ Central	291,444	611,135	109
„ Eastern	228,658	589,357	158
Surrey Portion	161,642	482,435	198

Comparing the Expenditure in the two years, 1803 and 1856, with the Population as declared by the Census in 1801 and 1851, the following is the result :—

Rate Per Head of the Expenditure upon the Population.

District.	1803.		1856.		Difference.	
					Decrease.	Increase.
	s.	d.	s.	d.	s.	d.
Kentish Portion	6	8	5	11	—	9
Midx.—Western	9	4½	7	8½	1	8
„ Central	10	3½	7	7½	2	8
„ Eastern	5	8½	6	4½	—	8
Surrey Portion	8	7½	7	7	1	—½

It thus appears that the poorer classes are increasing in the *Eastern* portion of Middlesex, as compared with the other parts of the metropolis, though the rate *per head* paid therein in respect of this tax is still by far the lowest in the Middlesex part of the metropolis. Whatever may be the present increase in the *Eastern* district, this portion has hitherto been the least burdened with reference to its numerical state.

VIII.—*Incidence of the Charge with reference to Property.*

Having considered the subject thus with reference to the numerical proportions of the Population, it is important to notice the proportions of the value of Real Property in the metropolis.

Two objects require to be considered. The one is the value of property assessed to the Property Tax, which is levied as one general equal tax, being imposed by the State upon all property equally. It may, considering the pains taken to acquire correct information, be taken to exhibit, as nearly as can be ascertained, the *actual* value of real property. The other object is the annual value of property upon which the Poor-rate and the other local rates dependent upon that rate are assessed. This value is ascertained by the Overseers, *i. e.*, by each set of officers in their own parishes, separately and exclusively, without reference to any general assessment. There is, indeed, the County-rate assessment, which should exhibit a more correct statement than the Poor-rate assessment, as it is based upon a uniform standard, but it is not necessary to refer to it on the present occasion.*

In discussing the questions as to the inequality of the Poor-rate Assessment in the metropolis, one of the points which is constantly referred to is, the basis upon which the assessment is calculated. Because, though any basis if duly acted upon may be sufficient for all the ratepayers of a parish, yet it is very different when the assessment of any parish is to be compared with that of its neighbour. Such comparison is necessarily unfair if the basis of the assessment be not the same or equal.

In the course of the inquiry instituted under the 43 Geo. III, c. 144, the following question was submitted to the Clerk of the Peace of every county—"What is the usual proportion of the rated rental to the rack rental in your county?"

The answer in Kent was—That the Clerk could not state anything satisfactorily on this head.

In Middlesex the Clerk answered—That above three-fourths of the parishes rate according to the rack rent, and others in the following proportions:—Two at two-thirds, one at two-fifths, seven at

* In one of the tables in the Appendix, the Assessment to the County-rate is shown.

three-fourths, eight at four-fifths, one at seven-eighths, and one at three-tenths.

In Surrey the Clerk stated—That before the Property Tax took place, the general professed proportion in most parts of the county was two-thirds, and as such it continued in certain hundreds, among the rest, Blackheath Hundred; but in most other parts of the county the parishes, since the passing of that Act, had been assessed at the rack rental.

In consequence of the great irregularities which prevailed in the valuation of parishes to the Poor-rate, the statute 6 & 7 Wm. IV, c. 96, commonly called the Parochial Assessment Act, was passed, which established the rule upon which all property was to be Assessed to the Poor-rate. According to that statute the Net Annual value is to be ascertained from an estimate “of the rent at which “the property may reasonably be expected to let, from year to year, “free of all tenant’s rates and taxes, and tithe commutation, rent-charge, if any, and deducting therefrom the probable average annual “cost of the repairs, insurance, and other expenses, if any, necessary “to maintain them in a state to command such rent.”

This rule of valuation differs from that upon which the Property Tax assessment proceeds, inasmuch as the deductions for repairs, taxes, and insurance are not allowed in the latter. Hence, there ought properly to be a considerable difference between the amount of the annual value of property assessed to the Property Tax and that assessed to the Poor-rate. But in the tables exhibited hereafter greater variations will be found to exist than can be accounted for upon this natural explanation. In truth, very great differences exist in the various parishes as to the mode of determining the rateable value of property to the Poor-rate. Greater allowances are made for the deductions in some than in others. The rates are compounded for by payments of the owners instead of the occupiers at a higher scale of allowance in some parishes than in others. The overseers of some parishes, also, proceed upon the valuation of property as it was estimated many years back, while others proceed upon recent valuations. But whatever be the cause of it, the question of the Metropolitan Rating cannot be duly considered without a careful attention to the great inequalities which exist in the rateable values of the various parishes which form the bases of the assessments.

Now, it appears that the Annual Value of property assessed to the Property Tax has been ascertained from returns to Parliament for the years 1815, 1843, and 1854-5;—and the annual value of the property assessed to the Poor-rate for the years 1847 and 1852. From these sources the following information is gathered:—

District.	Property Tax Valuation.			Poor Rate Valuation.	
	1815.	1843.	1855.	1847.	1852.
Kentish Portion.....	£ 181,609 ✓	£ 499,629 ✓	£ 576,093 ✓	£ 373,870 ✓	£ 447,309 ✓
Midx.—Western ...	1,427,667 ✓	4,162,752 ✓	4,629,925 ✓	2,979,681 ✓	3,425,278 ✓
„ Central ...	2,123,335 ✓	4,325,338 ✓	3,836,210 ✓	2,229,715 ✓	3,215,830 ✓
„ Eastern ...	1,097,599 ✓	1,963,744 ✓	1,969,166 ✓	1,405,318 ✓	1,598,133 ✓
Surrey Portion	883,554 ✓	1,979,576 ✓	2,116,112 ✓	1,471,826 ✓	1,667,598 ✓
<i>Totals</i>	5,713,760	12,921,039	13,127,576	8,460,310	10,354,148

It is, however, to be observed, that the Property Tax valuation in 1855 has been given, *exclusive* of the value of the Railways and Canals. Hence, the value of all the great metropolitan stations, and so much of the canals as is comprised within the metropolis, is to be added to that valuation. In the Poor-rate valuation the value of the railway stations, canals, basins, and other real property belonging to those companies included in the several metropolitan parishes, is given. The importance of this property is shown by the Parl. Paper 1858, No. 31, in which the value assessed to the Property Tax in the year 1857 is given *including the railways and canals*. By this return the value of the property in the borough of Marylebone is shown to be nearly 6 Millions, whereas, by the return for 1855, it appeared to be only 2½ Millions; and the total value of the real property in the metropolitan boroughs, which, it must be remembered, does not include all the metropolis, amounts to 18½ millions, while, according to the above Table, that for all the metropolis was not much above 13 millions.

The above table, however, shows how very much the Poor-rate valuation is *below* the real value estimated by the Property Tax valuation.

This great increase on the value of the metropolitan property leads naturally to the result fully shown in detail, by the tables hereafter annexed, of the *decrease* of the rate in the pound of this local tax of Poor Rate. The decrease is very great, notwithstanding the coterminous vast increase in the population of the metropolis.

The returns of 1803 give the rate in the pound for the Poor-rate, which term there *includes* the Church-rate, the Highway-rate, and the County-rate. The returns for 1847 and 1852 show the rate in the pound for so much only of the Poor-rate as is employed in the relief of the poor.

It appears, however, that in 1803 the total amount collected and

returned for the metropolis, under the name of Poor-rate, amounted to 517,482*l.*, of which sum 408,392*l.* was expended for the relief of the poor, so that it is only requisite that one-fifth should be deducted from the poundage set out to bring the table into strict comparison with those in the late returns above alluded to.

It thus appears that the Rate in the Pound was—

District.	In 1803.				In 1847.		In 1852.		Decrease from 1803 to 1852.	
	Gross.		Reduced.							
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Kentish Portion.....	4	3	3	5	1	5	1	3½	2	1½
Midx.—Western	3	2	2	6½	1	2	1	1	1	5½
„ Central	3	3	2	7	1	6	1	5	1	2
„ Eastern	3	4½	2	8	2	1	1	9	—	11
Surrey Portion	4	8½	3	9½	2	—	1	5½	2	4

The average rate in the pound for the whole metropolis, according to the returns above referred to, was in 1803, 3*s.*; in 1847, 1*s.* 7½*d.*; and in 1852, 1*s.* 5*d.*

Thus the greatly-increased value of the metropolitan property has had a universal effect in lowering the rate of this tax in the different parishes. Three or four very small parishes stand at a higher rate than in 1803: while two remain at the same rate, but in all these, if closely investigated, some peculiar and fortuitous circumstances would be discovered to explain the anomaly.

In 1852, the highest rated parish was St. Mary Mounthaw, near Thames-street, in the City of London, where the relief to the poor cost 5*s.* 7½*d.* in the pound. This parish is only one acre in extent, and contains only 34 houses. The lowest rated parish was the parish of Kidbrooke, in Kent, which contains 755 acres and 77 houses. The rate therein was only ½*d.* in the pound.

IX.—Incidence of the Charge in regard to the Numbers of Paupers.

The total charge of the Poor-rate in the metropolis has not increased in the same ratio as the population, so that some allowance is, perhaps, due to an improvement in the character and conduct of the lower classes of the metropolis, and somewhat to the better system of management consequent upon the reform of the Poor Laws in 1834. But it will tend to throw some light upon this subject if attention be directed to the numbers of paupers who are relieved in their different unions and parishes.

The enumeration of paupers has, however, been a subject of

much difficulty. If the calculation be made for a given period of time, it is impossible to avoid counting the same individual several times, either under the same or different conditions. Formerly indeed, it was the practice to refer to the numbers of paupers relieved within a given period, such as a year, or a quarter of a year. But the Poor Law Commissioners in 1847 established a system by which the numbers of paupers relieved on two given days in the year, namely, January 1 and July 1, should be shown in Statistical Returns. Unfortunately, their order has not been issued to the whole of the metropolis, and some very large and important parishes therein have not been required to make such Statistical Returns. But by an order of the House of Commons made last year, this return has been required, and the information has now been obtained for nearly the whole of the metropolis.

The return of 1803 gave the Number of the Paupers relieved during the whole of that year, and the Parl. Papers, 77/'58, show the numbers who were relieved on the 1st July, 1857, and the 1st January, 1858; and from those returns the progress of pauperism may be shown in the following tables for the metropolis:

District.	Number of Paupers Relieved.		
	In 1803.	1 July, 1857.	1 Jan., 1858.
Kentish Portion	3,801	5,730	6,321
Middlesex—Western	22,263	17,720	21,878
" Central	21,784	21,095	23,780
" Eastern	13,233	24,830	27,600
Surrey Portion	17,985	20,541	24,555
<i>Totals</i>	79,066	89,926	104,224

From this it will be seen that the relative proportions of the pauperism were in 1803, and are now, as follows, taking approximate figures:—

Kentish Portion	1·0 in 1803	1·0 in 1858
Middlesex—Western	5·8 "	3·1 "
" Central	5·7 "	3·7 "
" Eastern	3·5 "	4·3 "
Surrey Portion	4·7 "	3·6 "

So that there has been a great alteration for the better as regards the Western and Central portions, but for the worse as regards the Eastern portion. This corresponds with what has been already shown in reference to the numerical proportions of the population.

X.—Concluding Remarks.

Before concluding these remarks upon the statistical details, one point requires attention. In the year 1846, by the statute 9 & 10 Vict., c. 66, several classes of poor persons were rendered Irremovable from the parish in which they become destitute and require relief, although that parish is not the parish in which they are settled. Consequently the cost of their relief must be borne by it. So far as the parishes are separate no particular observation need be made in this paper, as the general operation of that statute is a national question. But a subsequent statute, which has been continued from year to year to the present time, has imposed the charge of the cost of that relief upon the common fund of Unions. That common fund is, however, raised by contributions of the several parishes based upon the amount of pauperism belonging to them. As already observed, there are fifteen Unions in the metropolis, and it appears, from the Ninth Annual Report of the Poor Law Board, (pp. 74, 76, 80), that, for the year ending Lady Day, 1856, the following is the state of the charge for the relief of the Irremovable Poor as compared with the general relief in those Unions:—

Unions..	Cost of Relief to Irremovable Poor.	Total Cost of all Relief.	Proportion Irremovable Relief to "Total Relief."
	£	£	Per Cent.
Greenwich	5,107	23,385	21·8
Lewisham	1,644	5,220	31·8
Fulham	2,089	10,310	20·3
Holborn	2,495	9,759	25·6
London, City	3,589	32,959	10·9
" East	5,562	15,685	35·5
" West	2,814	15,148	18·6
Strand	2,537	11,616	21·8
Stepney	4,248	22,699	18·7
Whitechapel	5,584	16,289	34·3
Hackney	2,313	11,144	20·8
Poplar	7,254	15,780	46·0
Olive, St.	1,765	5,741	30·7
Saviour, St.	2,814	8,633	32·6
Wandsworth and Clapham	3,873	16,217	23·9

This table shows a most remarkable variation in the incidence of this charge among the different Unions. The proportion varies from nearly a half of the total cost of relief in the Poplar Union to one-ninth in the City of London Union.

In adjoining Unions there is as great a discrepancy as between those in the separate counties. The fact must be noticed, but the explanation is at present not obvious. The classes who have been rendered Irremovable are those who have resided for five years without relief in the parish, including, of course, the wives and the children; widows for the first year of their widowhood; and those persons who meet with accidents or are attacked by diseases which will not produce permanent disability. It is difficult to see why those classes should be found in any one Union of the metropolis more than in others, when the peculiar constitution of the Unions above referred to is examined.

It is possible that the mode of administering the relief in these Unions by the Guardians might supply some explanation.

The investigation of the subject of this paper, complicated and extensive as it is, leads the inquirer to regret that a more simple scheme was not originally established for the administration of relief and the imposition of the poor rate in the metropolis, so that the numerous minute local divisions now prevailing might have been avoided. But it is clear that the requirements of this metropolis, for the relief of destitution and the repression of pauperism, demand a large local machinery which must be adjusted and adapted to the separate parts. The interests, the feelings, and the characteristics of the inhabitants of the different districts, both poor and rich, vary in the different parts of the metropolis, and point out, almost as an absolute necessity, distinct and separate management.

In regard to the imposition of the tax, it is seen that it varies, not only in the separate portions of the metropolis, but also among the several subdivisions of those portions. Some parishes in the West are still rated at a much higher rate than many of those in the East or the South, while parishes which are now lightly charged at the commencement of the century were heavily burdened when many of those now complaining had to bear a very slight charge, and it may well be hoped that the process of time, the progress of the population, or the fluctuations of property, will improve the condition of the parishes now oppressed, and render unnecessary the remedy now contemplated, by which the ratepayers of certain parishes are sought to be relieved by contributions from their neighbours, who are less burthened than themselves.*

This is certain, that the actual charge for the relief of the poor, imposed compulsorily upon the inhabitants of the metropolis, is becoming daily less burdensome in itself, while the Report, which has been lately laid before the Statistical Society upon that portion

* It appears that in the year ending Lady Day, 1857, the sum raised in the Metropolis under the name of Poor-rate, amounted to 1,425,063*l.*, while the sum expended on the relief to the poor was 867,337*l.*

of the benevolent institutions of the metropolis which relates to medical charities, shows most forcibly that charity, benevolence, and an earnest attention to the well-being of the poor and distressed classes, are not merely retained in the hearts of the citizens of this great metropolis, but are expanding year by year in every possible direction. It is true, that the local rates of the metropolis, many of which are consolidated with the Poor-rate, have largely increased in modern times, and, doubtless, are felt even more than the rate which should alone bear that name; but those local rates are applied to supply all the inhabitants of the metropolis with the means of enjoying their persons and their property in security and comfort, of procuring to them abundantly the great necessities of pure air and water, of facilitating their vast and varied traffic, and of improving to the utmost the health of themselves and of the numerous visitors who, for pleasure, instruction, or business, throng to this the most important city of the world.

THOS. TOOKE, F.R.S.

THE following Notice of Mr. TOOKE appeared in the Economist of Saturday, 6th March, 1858:—

“We have the painful task of recording the death of Mr. TOOKE, the venerable author of the ‘History of Prices,’ and in many respects for a long period the chief of living Economists.

“Mr. TOOKE died at his residence, 31, Spring Gardens, early on the morning of Friday, the 26th Feb. (58), and his remains were interred at Kensal-Green Cemetery on Thursday last, in a vault which already contains one or two members of his family. Mr. TOOKE’s age was within a few days of the completion of his 84th year; but it was not until within the last few months that he manifested very sensibly the decay of powers to be naturally expected at so advanced a period of life. The death of his second son, Mr. Thomas Tooke, jun. (one of the Directors of the Bank of England), after a very short illness, at the close of December, may be regarded as the more immediate cause of the sad event we now record. The suddenness and weight of the shock occasioned by so severe a bereavement as the loss of his son exhausted a strength already impaired and failing, and for the last two months Mr. TOOKE has been gradually sinking. But there has been no interval, even up to the latest moment, during which the clearness and serenity of mind for which Mr. TOOKE was so remarkable was interrupted.

“The long career of Mr. TOOKE has been one which invites and will repay scrutiny. He united in an eminent degree the sagacity and penetration of mind which enabled him to be a guide and discoverer in new paths, and the practical wisdom and soundness of judgment which qualified him to occupy a conspicuous place in the active business of life. In Mr. TOOKE’s case, the combination of the speculative with the practical faculty was exceedingly remarkable. Few men could be found more ardent in their pursuit of new truths, or more ready to adopt and maintain them when he had once satisfied himself that the discovery was a real one; but, at the same time, he may be classed among that small number of persons whose judgment is so clear and unbiassed, that the cases are exceedingly rare in which their deliberate advice is not fully justified by the event.

“For a long period, in the early part of his life, Mr. TOOKE was the leading partner in one of the largest houses engaged in the Russian Trade; and it was while so occupied that he acquired that

profound command of facts which enabled him to raise upon so wide and solid a basis the economical doctrines and discoveries which will ever bear his name.

"The work which preceded the 'History of Prices' was entitled 'Thoughts and Details on High and Low Prices,' and appeared in 1823. A second edition was published in the following year. The first two volumes of the 'History of Prices'—the work upon which Mr. Tooke's fame principally rests—appeared in 1838. Two further volumes appeared in 1840 and 1847; and it was only in the spring of last year that the fifth and sixth volumes, embracing the important period from 1848 to 1857, and extending, in many respects, the scope of the earlier volumes, were published.

"In these two closing volumes, as is well known, Mr. Tooke relied, to a great extent, upon his coadjutor and friend and pupil, Mr. Newmarch—a coadjutor who may be justly said to be, in some important degree, the representative of the school of which Mr. Tooke is the founder.

"But the active sphere filled by Mr. Tooke was of scarcely less interest than his pursuits as a philosopher. He was Governor, by re-election, for several successive terms, of the Royal Exchange Assurance Corporation—he was Chairman, under similar circumstances of repeated choice, of the St. Katherine's Dock Company—and he was one of the earliest promoters of the London and Birmingham Railway. He contributed largely to the establishment of the Statistical Society, and to the latest period of his life he never lost an opportunity of forwarding the objects of that association. He was a Factory Commissioner in the early days of the great and difficult controversy out of which that Commission arose, and he was the Chairman of the subsequent Commission relative to the Employment of Children. Among the last honours he received was the distinction of being elected a Corresponding Member of the French Academy.

"It is well known that Mr. Tooke was the author of the Merchants' Petition of 1820 in favour of Free Trade, and that, in point of fact, the Free Trade movement then commenced was in a large measure originated by him. The Petition itself is a noble document, and every principle it sets forth has been since made the groundwork of legislation.

"He has now passed away, full of years and honours; and so long as patience and intrepidity in the pursuit of truth—a rare sagacity in separating real from spurious science—and the promotion, by his own active example, of every useful work—can constitute a claim to gratitude and respect, so long will the name of THOMAS TOOKE fill a distinguished place in the history of the time in which he lived."

A COMMITTEE has been formed for the purpose of raising a Memorial to Mr. TOOKE, and includes the following names:—THE EARL OF HARROWBY; RT. HON. LORD STANLEY, M.P.; THE CHANCELLOR OF THE EXCHEQUER; RT. HON. SIR G. C. LEWIS, Bart., M.P.; SIR BENJAMIN HAWES, K.C.B.; SIR JOHN P. BOILEAU, Bart., F.R.S.; GEORGE CARR GLYN, Esq., M.P.; T. A. MITCHELL, Esq., M.P.; JAMES WILSON, Esq., M.P.; T. M. WEGUELIN, Esq., M.P.; GEORGE W. NORMAN, Esq.; J. W. GILBART, Esq., F.R.S.; WILLIAM ELLIS, Esq.; WILLIAM FARR, M.D., D.C.L., F.R.S.; WILLIAM A. GUY, M.B.; W. G. LUMLEY, Esq.; JOHN T. DANSON, Esq.; CHARLES JELlicoe, Esq.; FREDERICK HENDRIKS, Esq.; WILLIAM NEWMARCH, Esq.

A Meeting of this Committee was held at the Rooms of the Statistical Society, on Thursday, 22nd April, 1858, Sir John P. Boileau, Bart., F.R.S., Vice-President of the Statistical Society, in the Chair, when the following Resolutions were adopted, viz.:—

"1. That, considering the extent and value of the services rendered to Economic Science and Statistics by the late THOMAS TOOKE, F.R.S.:—his high personal character:—and his long, honourable, and useful career in connexion with the commerce of the City of London, it is desirable, on public grounds, that his name should be preserved by means of some fitting and useful Memorial.

"2. That, as there is not at present any Endowment in the Metropolis for the systematic teaching of Economic Science:—and as there is good reason to believe that a Professorship in King's College may be rendered an efficient means of promoting the study thereof, not merely among the ordinary members of the College, but also among young men engaged in mercantile pursuits:—and also as it appears that an Endowment of this nature in King's College would be especially agreeable to Mr. TOOKE's family: it is the opinion of this Committee that the proposed Memorial may best consist in the provision, by means of subscriptions, of an Endowment, under suitable statutes, in *King's College, London*, of a TOOKE PROFESSORSHIP OF ECONOMIC SCIENCE AND STATISTICS.

"3. That it is also desirable, in the event of the amount of subscriptions admitting of such a course, to provide for an annual *Tooke Prize* of limited amount, in connexion with the Statistical Society of London, to be awarded to the authors of Papers read before that Society, distinguished for eminent usefulness, or original research.

"4. That a Subscription List be now opened for the preceding purposes.

"5. That the Treasurer of the Statistical Society, Dr. FARR, be requested to act as Treasurer of the proposed Fund, to be called

the "Tooke Memorial Fund," and to open a separate account with Messrs. DRUMMOND AND Co., under that title, and, if necessary, with other Bankers.

"6. That the Honorary Secretaries of the Statistical Society, viz., Mr. NEWMARCH, Dr. GUY, and Mr. LUMLEY, be requested to act as Honorary Secretaries of the "Tooke Memorial," and to announce it in the usual modes.

"7. That this Committee be adjourned to a future day, notice whereof to be given by the Honorary Secretaries, when the amount of the subscriptions may be reported, and measures be taken for carrying the proposed objects into effect."

It is presumed that about Two Thousand Pounds will suffice for the contemplated objects, and subscriptions for a considerable part of that sum have been already promised. Intimations of a desire to contribute may be sent to the Honorary Secretaries of the "Tooke Memorial," 12, St. James's Square, London, S.W.

Note by Editor on the Four abstract Tables of Imports, Exports, Shipping, and Bullion, at pp. 214—217 infra.

By means of these four abstract Tables it has been sought to condense into a form suitable for the *Journal* the leading results of the elaborate Tables of Trade and Navigation, which are now issued monthly by the Board of Trade. These Tables in their original form extend to 32 folio pages, and although no portion of their contents can be considered to be in the least degree superfluous, it is nevertheless convenient to be able to arrive at the general results in a summary form. The course followed, therefore, at pp. 214—217, has been to collect the figures into as few groups as possible, and to arrange them according to an obvious classification. The magnitude of the sums dealt with has rendered it possible and desirable to dispense with fractions below 1,000. The Computed *Real Value of Imports* has only been ascertained from month to month since the opening of 1858. The Computed *Real Value of Bullion* is ascertained under an Act passed only in 1857. The "Enumerated" articles of Imports (or those only which are given in the official Tables) amount to about 80 *per cent.* of the Total Imports. The Total Imports, therefore, to 31st March, 1858, would be 18,141,000*l.* + 4,536,000*l.* = 22,677,000*l.*

**THE MARRIAGES, BIRTHS, AND DEATHS,
REGISTERED IN THE DIVISIONS, COUNTIES, AND DISTRICTS OF ENGLAND.**

*The MARRIAGES for the QUARTER ended DECEMBER, 1857, and the BIRTHS
and DEATHS for the QUARTER ended MARCH, 1858.*

AS PUBLISHED BY AUTHORITY OF THE REGISTRAR-GENERAL.

THIS Return comprises the BIRTHS and DEATHS registered by 2,196 Registrars in all the districts of England during the winter quarter that ended on March 31st, 1858; and the MARRIAGES in 12,272 churches or chapels, about 3,939 registered places of worship unconnected with the Established Church, and 629 Superintendent Registrars' offices, in the quarter that ended on December 31st, 1857.

The return presents an unfavourable aspect. The marriages of the year 1857 and of the last quarter of that year were below the average number. The weather was severe, the people suffered, and the death-rate in the first quarter of the year 1858 was heavier than it is on an average; but the birth-rate in the same quarter, though lower than in the three previous winters, was above the average. The population of the country is still increasing.

MARRIAGES.—The Christmas quarter is always distinguished in England and Wales by the multitude of its marriages. *Ninety-one thousand seven hundred and seventy-two* persons married in the last three months of 1857. The marriages of the quarter were at the rate of 1·878 persons married to 100 living in a year; the decennial average rate of the corresponding quarter being 1·994.

BIRTHS.—The births of 171,001 children, born alive, were registered in the quarter that ended on March 31st; a number exceeding by 620 the births in the corresponding winter quarter of 1857; and the highest number that was ever registered within the same time and season. Children were born at the rate of 1,900 a-day.

**ENGLAND :—MARRIAGES, BIRTHS, and DEATHS, returned in the Years
1852-58, and in the QUARTERS of those Years.**

Calendar YEARS, 1852-58 :—Numbers.

Years	'58.	'57.	'56.	'55.	'54.	'53.	'52.
Marriages No.	159,392	159,262	152,113	159,727	164,520	158,782
Births	662,884	657,704	635,043	634,405	612,391	624,012
Deaths	420,019	391,369	425,703	437,905	421,097	407,135

QUARTERS of each Calendar Year 1852-58.

(I.) MARRIAGES :—Numbers.

Qrs. ended last day of	'58.	'57.	'56.	'55.	'54.	'53.	'52.
March .....No.	33,381	33,388	29,186	33,234	35,149	32,977
June "	41,296	39,796	38,549	40,518	40,446	40,092
Septmbr. "	38,829	39,152	37,308	38,182	39,899	38,400
Decmbr. "	45,886	47,926	47,070	47,793	49,026	47,313

QUARTERS of each Calendar Year 1852-58.

(II.) BIRTHS :—Numbers.

<i>Qrs. ended last day of</i>	'58.	'57.	'56.	'55.	'54.	'53.	'52.
March .....No.	171,001	170,381	169,252	166,225	160,785	161,729	161,803
June ..... "	....	170,313	173,204	165,277	172,457	158,697	159,031
Septmbr. .... "	....	161,215	157,633	154,700	154,724	147,602	151,222
Decmbr. .... "	....	160,975	157,615	148,841	146,439	144,363	151,956

(III.) DEATHS :—Numbers.

<i>Qrs. ended last day of</i>	'58.	'57.	'56.	'55.	'54.	'53.	'52.
March .....No.	125,902	108,527	103,208	134,542	111,843	118,119	106,358
June ..... "	....	100,205	100,210	106,493	102,586	107,647	100,625
Septmbr. .... "	....	100,590	91,330	87,646	113,843	92,201	100,382
Decmbr. .... "	....	110,697	96,521	97,022	109,633	103,130	99,770

The births in the quarter were at the rate of 3·568 annually to 100 of the population, the average being 3·518.

The births fluctuate little in comparison with the marriages and the deaths in the several divisions of the kingdom; but the decrease of births in the northern counties is worthy of note.

INCREASE OF POPULATION.—171,001 births and 125,902 deaths were registered in the first 90 days of the year; and the natural increase of population in that period was therefore 45,099, or 501 daily. The natural increase in the winter quarter of 1857 was 687 daily. The falling off in the increase of population is referable to the excessively high rate of mortality during the past winter; for the births exceeded by 7 daily the births in the winter of 1857.

The natural increase of population in the United Kingdom was probably about 750 daily.

19,146 emigrants sailed from the ports of the United Kingdom at which there are Government emigration agents, of whom 7,230, or, allowing for persons of undistinguished birthplace, 8,142, were of English origin. On an average, 90 English emigrants left our shores daily. 5,683 of the English emigrants sailed to the Australian colonies; 2,299 to the United States; none to the North American colonies.

Nothing is more remarkable in the movement of our population than the decrease of Emigration since the war. In the three months of 1849, January, February, and March, 60,626 emigrants sailed from our ports; 49,524 to the United States, 1,337 to British North America, and 8,627 to the Australian colonies; in the corresponding three months of 1858 only 19,146 emigrants sailed from the same ports, 8,208 to the United States, 24 to British North America, and 9,867 to the Australian colonies.*

* The number returned as of English origin was 7,230, while the birthplace of 2,142 was not distinguished. In the above statement a proportional number of these have been added to those returned as of English origin.

ENGLAND:—*Annual Rate Per Cent. of MARRIAGES, BIRTHS, and DEATHS, during the YEARS 1852-58, and the QUARTERS of those Years.*

Calendar YEARS, 1852-58:—General Per Centage Results.

YEARS	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
Estmd. Popln. of England in thousands in middle of Year.....	19,305,	19,045,	18,787,	18,619,	18,403,	18,206,
Marrs. Per ct.	·842	·826	·836	·810	·858	·894	·872
Births "	3·374	3·434	3·454	3·380	3·407	3·328	3·428
Deaths.... "	2·247	2·176	2·055	2·266	2·352	2·288	2·236

QUARTERS of each Calendar Year, 1852-58.

(I.) MARRIAGES:—Per Centages.

Qrs. ended last day of	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
March....Per ct.	·705	·705	·707	·633	·728	·778	·730
June..... "	·853	·860	·819	·824	·875	·883	·885
Septmbr. "	·809	·797	·814	·787	·813	·859	·826
Decmbr. "	·997	·939	·993	·989	1·015	1·053	1·027

(II.) BIRTHS:—Per Centages.

Qrs. ended last day of	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
March....Per ct.	3·568	3·518	3·599	3·585	3·603	3·520	3·578	3·582
June .... "	....	3·551	3·546	3·655	3·534	3·722	3·464	3·509
Septmbr. "	....	3·247	3·308	3·278	3·261	3·294	3·177	3·291
Decmbr. "	....	3·181	3·294	3·267	3·128	3·111	3·100	3·298

(III.) DEATHS:—Per Centages.

Qrs. ended last day of	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
March....Per ct.	2·627	2·472	2·292	2·186	2·916	2·449	2·613	2·354
June..... "	....	2·226	2·086	2·117	2·277	2·214	2·355	2·221
Septmbr. "	....	2·140	2·064	1·899	1·848	2·423	1·985	2·185
Decmbr. "	....	2·154	2·265	2·001	2·039	2·329	2·214	2·165

THE WEATHER AND THE PRICE OF PROVISIONS.—The weather was colder and drier than usual during the three months, of which February was much the coldest. The mean temperature of that month, at the Greenwich Observatory, was $34^{\circ}6$, or $3^{\circ}7$ below the average ($38^{\circ}3$) of 87 years. Yet this February was not so cold by $5^{\circ}2$ as the February of 1855, which froze our unfortunate troops in the Crimea.

The Average Prices of CONSOLS, of WHEAT, MEAT, and POTATOES, also the Average Quantity of Wheat sold and imported Weekly, in each of the nine QUARTERS ended March 31st, 1858.

1	2	3	4	5	6	7	
Quarters ended	Average Price of Consols (for Money).	Average Price of Wheat per Quarter in England and Wales.	Wheat sold in the 390 Cities and Towns in England and Wales making Returns.	Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the <i>Meat</i> Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterwise Market, Southwark.
			Average Number of Quarters weekly.		Beef.	Mutton.	
		s. d.	No.	No.	d. d. d.	d. d. d.	s. s. s.
1856 31 Mar.	90½	72 4	92,152	48,018	4½—6½ 5½	4½—6½ 5½	78—93 86
30 June	93½	68 8	104,952	63,093	4½—6½ 5½	5—6½ 5½	70—90 80
30 Sept.	95	72 3	78,208	117,807	4½—6½ 5½	5—7 6	75—80 78
31 Dec.	92½	63 4	112,909	103,328	3½—6½ 5½	4½—6½ 5½	90—110 100
1857 31 Mar.	93½	56 10	102,433	51,310	4½—6½ 5½	5½—7½ 6½	100—120 110
30 June	93½	56 9	107,850	42,178	4½—6½ 5½	4½—6½ 5½	105—150 127
30 Sept.	90½	59 11	92,156	55,384	4½—6½ 5½	4½—7 5½	95—115 105
31 Dec.	89½	52 0	101,025	95,587	4½—6½ 5½	4½—7 5½	130—150 140
1858 31 Mar.	96½	46 5	99,604	64,652	4½—6½ 5½	4½—7 5½	130—175 152

Note.—The Total Number of Quarters of Wheat sold in England and Wales, and entered for Home Consumption, has been as follows:—

13 Weeks ended	Qrs. Sold.	Home Consumption. Qrs. Entered.
1856—31 March	1,197,000	624,000
„ 30 June	1,364,000	820,000
„ 30 Sept.	1,016,000	1,531,000
„ 31 Dec.	1,467,000	1,446,000
1857—31 March	1,331,000	667,000
„ 30 June	1,402,000	548,000
„ 30 Sept.	1,198,000	719,000
„ 31 Dec.	1,313,000	1,242,000
1858—31 March	1,294,000	840,000

Setting down saturation of the air with aqueous vapour as 1·00, the degree of humidity was ·83, thus wanting ·17 of saturation. The average degree of humidity during 17 years was ·86. The rain-fall was 3·3 inches. Mr. Glaisher has described the meteorological phenomena of the quarter (p. 211).

The Price of Provisions has undergone great fluctuations. The price of wheat in the first three months of each of the three years 1856, 1857, and 1858, was, on an average, 72s. 4d., 56s. 10d., and 46s. 5d. a quarter. The fall of price since 1856 has been 36 per cent., and since 1857 it has been 18 per cent. Beef and mutton, by the carcase at Leadenhall and Newgate markets, were cheaper in the winter of 1858 than in the winter of 1857. The price of beef fell from 5½d. to 5¼d. a pound, of mutton from 6½d. to 5½d. a pound. Beef is at the same price, mutton is dearer than it was in the first three months of 1856.

Potatoes present an unfortunate exception; they attained an exorbitant price. The York Regents at the Waterside Market, Southwark, in the three winters of 1856, 1857, and 1858, sold respectively at 86s., 110s., and 152s. 6d. a ton. The price in 1858 was 39 per cent. higher than the price in 1857, and 77 per cent. higher than the price in 1856. The greengrocer's bill has thus increased; and the supply of vegetables for the poor population has been inadequate.

STATE OF THE PUBLIC HEALTH.—125,902 Deaths were registered in the three months ended on March 31st. This number exceeds, by 17,375, the deaths in the corresponding winter quarter of the previous year, and by 22,694 the deaths in the winter quarter of 1856. The rate of mortality in the three winter quarters was 2·186, 2·292, and 2·627 per cent. per annum; or about 22, 23, and 26 per 1,000. As a general rule the mortality in England is highest in cold winters, lowest in winters of moderate temperature, and it has a tendency to rise when the temperature of the winter quarter exceeds 40 degrees of Fahrenheit.

The Mortality of the Quarter was at the rate of 2·854 per cent. in the town districts, and at the rate of 2·367 per cent. in the country districts, thus exceeding the average in town districts by ·176, and the average of country districts by ·141. The cause of the increase, therefore, pervaded town and country; but its pressure was most severely felt in the towns.

The deaths in the three months amounted to 125,902, and the mortality was at the rate of 26 deaths annually in 1,000 of the population. Had the mortality been at the rate of 17 annually in 1,000, the deaths would have amounted to 82,000. The excess of deaths over this number in the 90 days was 43,902, or 488 daily, which it was shown in the last quarterly report may be properly designated unnatural deaths.

The prevailing diseases which are mentioned by the Registrars in their notes are chiefly Epidemics of the zymotic class; but diseases of nearly every class, and more particularly diseases of the respiratory organs, have been unusually rife.

A disease, which is now new, but has been described afresh in France, has been fatal in several districts. It has been called "Throat Disease" in some of the returns, and from its having attacked English visitors in Boulogne, the name of that town has been occasionally employed to qualify the affection. Diphtheria, its name in the statistical nosology, is adopted from the French writer who described the disease under the name of *diphtherite*, in reference to the characteristic membranous exudation in the throat.* The termination "*itis*," as in gastritis, is used in medical language to designate pure inflammation of the organ, which the root of the

* Diphtheria—*διφθίρα*—a prepared hide, leather. *διφθίραι* were used for writing on in the east, like vellum or parchment. (Liddell and Scott.)

word expresses; hence *is* has been substituted for *ite*, the French form of "*itis*," as this cannot with any propriety be placed after *diphtheria*, designating a product of disease, and not an organ of the body.

Diphtheria, the Registrar states, prevailed in Canterbury, and in many instances proved fatal. The deaths (129) exceeded the births (105) in Canterbury; and nearly equalled them in the contiguous district of Blean.

In Essex one case of Diphtheria, and three of "putrid sore throat," probably the same disease, have been registered in the parish of Ramsden Bellhouse (Billericay), where affections of the throat have been prevalent. The three cases were in one family. The Registrar was told that some nuisances existed at the back of the cottages where the deaths occurred. "Putrid sore throat" still prevails in Bradwell (Maldon), also in Essex, and was the cause of 8 out of 21 deaths: upwards of 400 cases have been attended by the Registrar.

In the Bulmer sub-district (Sudbury), Suffolk, the deaths (57) exceeded the births (33); and the increase of deaths is owing to diphtheria amongst the children, bronchitis and influenza amongst the old. Diphtheria was a cause of the increase of deaths in Ludham and Bacton sub-districts in Norfolk. The mortality of Essex

Deaths in the Winter, (Jan.—Mar.) 1851-58.—Numbers.

DEATHS, &c.	1858.	Total 1848-57, (10 Years.)	1857.	1856.	1855.	1854.	1853.	1852.	1851.
In 125 Districts and 23 Sub-districts, comprising the Chief Towns	63,678	568,273	56,890	54,006	68,244	58,947	59,604	54,844	54,637
In the remaining Districts and Sub-Districts of England and Wales, comprising chiefly Small Towns and Country Parishes ...	62,324	544,015	61,637	49,202	66,298	52,896	58,515	51,514	50,723
All England	125,902	1,112,288	108,527	103,208	134,542	111,843	118,119	106,358	105,359

AREA, POPULATION, DEATHS, and MORTALITY per Cent. in the Winter Quarters, (Jan.—Mar.) 1848-58.

GROUPS.	Area in Statute Acres. (England.)	Population Enumerated. (England.)		Deaths in 10 Winter Quarters, 1848-57.	Average Annual Rate of Mortality per Cent. of 10 Winter Quarters, 1848-57.	Annual Rate of Mortality per Cent. in the Winter Quarter 1858.
		June 6-7th, 1841.	March 31st, 1851.			
In 125 Districts, and 23 Sub-Districts, comprising the Chief Towns	No. 2,149,800	No. 6,838,069	No. 8,247,017	No. 568,273	Per ct. 2·678	Per ct. 2·854
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly Small Towns and Country Parishes	35,175,115	9,076,079	9,680,592	544,015	2·226	2·367
All England	37,324,915	15,914,148	17,927,609	1,112,288	2·472	2·627

and of Suffolk was high during the quarter; and the mortality of the population of Norfolk was raised above its average nearly in the proportion of 3 to 2.

Diphtheria is again noticed by the Registrar as the cause of a sixth of the deaths in Brewwood sub-district, Staffordshire: three fatal cases occurred in one house. In Crick, one of the sub-districts of Rugby, two deaths occurred from diphtheria; two from acute laryngitis. The deaths exceeded the births. The sub-district comprises eleven parishes, in none of which are steps taken for the removal of nuisances.

No notice has been taken of the disease by the Registrars either in the country north of Staffordshire or in Wales; and it has probably not prevailed there epidemically to any great extent. It is, however, allied to one of the forms of scarlatina, and is still confounded with that disease, with croup, or with quinsy, by some practitioners.

Diphtheria, like Asiatic cholera, is probably only a more intense form of an old disease; but new intense spreading forms of disease deserve close attention, for, with the increasing density of population, the intimate connexions between England and every unhealthy climate of the world, and the slow progress of sanitary improvement, we cannot consider ourselves absolutely safe from an eruption of some epidemics, which, like their predecessors, may open a new chapter, not only of medical, but of national history; for Niebuhr acutely remarks, that the great epochs of history are marked out by pestilences.

Epidemics, like new varieties of animals, spring up under favourable circumstances. Each epidemic form has its congenial climate. The cholera epidemic is bred on the delta of the Ganges; yellow fever on the banks of the Mississippi; plague around the Nile in Lower Egypt; typhus in our towns; ague in our marshes; diphtheria, according to the popular theory in France—where the conditions are more favourable, on the whole, than they are in England—to the diffusion of putrid effluvia over the fauces.

Every Englishman admires the works of art, the picture galleries, the houses, the furniture, the cultivated personal tastes which surround him on every side in Paris, or on a small scale in Boulogne; he admires some of these objects every day, others every week; but has every day to give up his admiration at the door of that inscrutable cabinet, where the light of French refinement never comes; where his throat is assailed by the poisonous distillations that engender disease, and explode—if you count well the victims—with much more fatal consequences than gunpowder, or even than fulminating quicksilver. That men should lock up jewels in cabinets, keep their larders full of delicacies, or stock their cellars with wine, is natural; but it is a singular absurdity in civilised men to attempt to hoard for years this volatile essence, which bursts its chains, and, like an unclean spirit, enters, not only every apartment in the house, but every channel of access to the living chambers of the body, leaving at times such traces of its passage as diphtheria in the throat. The disease once generated wanders abroad, and destroys life under circumstances quite different from those in which it was born; but impurity is always its natural ally.

The Scotch threw these matters into the streets, and justly incurred the censure of the fastidious. In London, and even in the country mansions of England, retreats still exist which may rival the French magazines of impurity; but it has of recent years been the practice to throw the guano compounds of London, with water, into the sewers, which, though not constructed for the reception of such matters, and consequently suffering their volatile principles to escape into the streets, convey a portion of their elements to the Thames, and commit them to its flood of tidal waters.

Dr. Barker has recently performed an ingenious series of experiments on animals, to determine the effects of each of the noxious principles which arise from

cesspools. He placed the animals in a close chamber by a cesspool, with which a tube opening into the chamber communicated; and a lamp was arranged so as to draw a current of cesspool air steadily over the creatures inside. With a pair of bellows Dr. Barker could draw the air from the chamber. A young dog in half an hour "became very uneasy and restless; he vomited, and had a distinct rigor, and, in the course of a day, was exhausted. When he was removed he soon recovered." "Another dog was subjected to the cesspool air during twelve days:" in the first seven days he underwent a series of sufferings, not unlike the symptoms of the diseases of children in hot weather; on the ninth he was very ill and miserable." After he was liberated, on the twelfth day, he remained "very thin and weak for six weeks." Dr. Barker then continued his experiments on the effects of definite doses of the gases in the sewers, and killed or poisoned several sparrows, linnets, jackdaws, and dogs.*

Thus Dr. Barker has, for our instruction, imitated, on a small scale, and on a few of the inferior animals, the vast experiment which is constantly going on, and destroys thousands of men, women, and children all over England. Instead of a few animals in a close chamber, more than two millions of people live in London over sewers and cesspools. The poison is generated in every house; it is distributed conveniently along all the lines of road, so as to throw up its vapours into the mouths, throats, and lungs of the people through innumerable gully-holes, which are either left untrapped, or trapped imperfectly, in order that the poisonous gases might escape. A variation in the pressure of the atmosphere draws up the stinking air from the sewers, like Dr. Barker's bellows. All the details of the experiment were as carefully contrived by the engineers of the old sewers' commissioners as if they were constructing an apparatus for passing currents of poisonous air steadily over the people of London, with a view, like Dr. Barker, to ascertain their exact effects. The engineers of the new Board of Works have endeavoured to keep the apparatus in order.

It is now time that this cruel experiment should cease. Last year, when no epidemic prevailed, not less than 14,795 unnatural deaths were registered in London. This was the aggregate effect of the impure air, and of other sanitary defects.

Will the London Boards of Works stop the experiment? Are they, like Dr. Barker, convinced and satisfied? Will they bring their common sense to bear on this question? Gases are constantly generated in the sewers and cesspools, and these gases will escape. Their elasticity carries them—and perhaps still more poisonous organic compounds—through the gully-holes, so long as there is no other outlet. But what can be an easier engineering problem than to discharge into the atmosphere the sewer gases, through pipes running up, and at least as high as the chimneys? This is in partial operation, and if made universal would be a mitigation of the evil. There are many ways of getting entirely rid of these gases, and why should not the inexpensive work be at once done?

The sweet odours that enter this country are taxed; and every one has witnessed the admirable zeal of Her Majesty's customs' officers in their searches for *Eau de Cologne*. If a tax could be levied upon odours of another description, bearing some proportion to the evil they do, it would be much more productive; and if it were levied through the agency of the Board of Works in London, and the Sewers Commissions elsewhere, it might be more beneficial, as they would undoubtedly find it economical to substitute fountains of rose-water for their present gully-hole.

* See paper on "The influence of Sewer Emanations," by T. Herbert Barker, M.D., F.R.C.S., in Dr. Richardson's excellent *Sanitary Review* for April, 1858, pp. 70-82. The London sewers are only imperfectly represented by one cesspool; their emanations vary infinitely.

MARRIAGES Registered in the Quarters ended 31st December, 1855-57; BIRTHS and DEATHS Registered in the Quarters ended 31st March, 1856-58, in the Divisions of England.

DIVISIONS.	AREA in Statute ACRES.	POPULATION, 1851. (Persons.)	MARRIAGES			BIRTHS			DEATHS			
			Registered in the Quarter ended the last Day of									
			December			March.			March.			
			1855.	No.	1856.	No.	1857.	No.	1856.	No.	1857.	No.	1858.	No.
ENGLD. & WALES.....Totals	37,344,915	17,927,609	47,070	47,926	45,886	169,252	170,381	171,001	103,208	108,527	115,902	
I. London.....Totals	78,029	2,362,236	6,850	6,877	6,688	23,094	23,360	23,653	14,539	15,739	17,147	
II. South Eastern Counties	4,065,105	1,628,386	4,238	4,245	3,901	14,213	14,448	14,386	8,384	8,740	10,441	
III. South Midland Counties	3,201,290	1,234,332	3,182	3,208	3,213	10,757	10,863	11,207	6,219	6,637	7,945	
IV. Eastern Counties.....Totals	3,214,099	1,113,982	3,180	3,275	3,025	9,590	9,653	9,786	5,545	5,663	7,591	
V. South Western Counties	4,994,490	1,803,291	3,785	3,788	3,618	14,500	14,446	14,714	8,885	9,733	11,350	
VI. West Midland Counties	3,865,332	2,136,573	5,987	6,076	5,973	21,578	21,463	22,275	12,509	13,882	15,764	
VII. North Midland Counties	3,540,797	1,215,501	2,953	3,052	2,737	11,197	11,205	10,927	6,367	6,413	8,029	
VIII. North Western Counties	2,000,227	2,488,438	6,551	7,049	6,262	25,724	26,126	25,812	17,650	18,024	19,824	
IX. Yorkshire.....Totals	3,654,636	1,789,047	4,781	4,791	4,638	17,475	17,997	17,566	10,339	11,002	12,363	
X. Northern Counties	3,492,322	969,126	2,468	2,295	2,609	10,397	10,162	9,802	5,995	5,879	6,593	
XI. Monmouthsh. and Wales.....Totals	5,218,588	1,186,697	3,095	3,270	3,222	10,727	10,658	10,873	6,777	6,815	8,855	

REMARKS ON THE WEATHER,

DURING THE QUARTER ENDING MARCH 31st, 1858.

By JAMES GLAISHER, Esq., F.R.S., &c., *Sec. of the British Meteorological Society.*

January—till the 7th the air was cold, being $3^{\circ}2$ below the average; it then was warm until the 20th, the average excess being $4^{\circ}7$; it then again became cold till the 27th, the deficiency being daily $4^{\circ}2$ from the average; and from the 28th to the end of the month was warm, being $4^{\circ}7$ in excess. The mean high day temperature was $43^{\circ}8$, exceeding the average by $0^{\circ}8$; the low night temperature was $31^{\circ}7$, being $1^{\circ}9$ deficient from the average. The mean temperature of the month differed but little from the average.

February—was cold nearly throughout, except on the 3rd, 4th, 5th, 6th, and 13th, when the temperature somewhat exceeded the average. The mean high day temperature was $41^{\circ}8$, being $2^{\circ}7$ below the average; and the mean low night temperature was $29^{\circ}8$, or $3^{\circ}6$ deficient from the average. The mean temperature of the month was nearly 4° below the average.

March—till the 12th was cold, the average deficiency amounting to 8° ; and from the 13th to the end of the month it was warm, the month averaging $5^{\circ}3$ in excess. The mean high day temperature of this month was $50^{\circ}7$, exceeding the average by 1° ; whilst that of the low night was $33^{\circ}6$, being deficient from the average by $1^{\circ}5$. This month was nearly of its average temperature.

The decrease of mean temperature of the air from January to February, south of latitude 51° , was 2° ; and north of that parallel varied from 2° to 4° ; and the increase from February to March varied from 2° to 4° at places south of latitude 51° , and and from 4° to 7° at places north of 51° . The greatest differences occurred in the midland counties.

The mean degree of Humidity was less in each month, and the mean temperature of the dew-point was also less than its average value in each month, and in all cases to greater amounts than the deficiency of temperature, and therefore the air was less humid than usual.

The reading of the Barometer was nearly half an inch in excess of the average in the month of January, and was much higher than any mean reading during the last 17 years. In February it was slightly above the average, and in March a little in defect.

The fall of Rain in January and March was deficient, and in February in excess of the average, and was nearly half an inch in defect upon the quarter.

There was almost a total absence of Thunder or Lightning during the quarter; one storm only was noticed, on the 5th of March at North Shields; and either thunder

was heard or lightning seen on March 24th, 30th, and 31st at Liverpool, Hastings, Wakefield, and Oxford.

The mean temperature of the air at Greenwich for the quarter ended February, constituting the three winter months, was 39°·0, being 1°·3 above the average of 87 years.

1858. Months.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.		Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames					
		Mean.	Diff. from Average of 87 Years.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Mean.		Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 16 Years.
Jan.	37·5	+1·6	0·6	35·9	-1·2	33·8	-1·6	13·1	+2·7	39·5	In. 194	In. 011	Gr. 2·2	Gr. -0·2	
Feb.	34·6	-3·7	-3·9	33·0	-4·0	30·4	-4·3	12·0	+0·9	38·5	169	-034	2·0	-0·4	
Mar.	41·4	+0·5	-0·2	38·4	-0·8	34·6	-1·7	17·1	+2·4	39·0	201	-015	2·3	-0·2	
Mean.....	37·8	-0·5	-1·6	35·8	-2·0	32·9	-2·5	13·7	+2·0	39 0	188	-020	2·2	-0·3	

1858. Months.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Amnt.	Diff. from Average of 40 Years.		Number of Nights it was				
											At or below 30°.	Between 30° and 40°.	Above 40°.	Lowest Reading at Night.	Highest Reading at Night.
Jan.	86	- 3	In. 30·171	+·449	Gr. 563	Gr. +10	In. 0·7	In. -0·6	Miles. 119	25	4	2	10·2	44·0	
Feb.	84	- 2	29·841	+·063	560	+ 7	1·7	+0·4	83	24	4	...	12·2	39·2	
Mar.	78	- 4	29·765	-·037	551	...	0·9	-0·2	87	19	9	3	15·0	45·2	
Mean.....	83	- 3	29·926	+·158	558	+ 6	Sum 3·3	Sum -0·4	Mean 96	Sum 68	Sum 17	Sum 5	Lowest 10·2	Highest 45·2	

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

The following is the usual Meteorological Table for England and Wales for the Quarter ended 21st March, 1858:—

ENGLAND.—Meteorological Table, Quarter ended 31st March, 1858.

NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tempera- ture in the Quarter.	Mean Monthly Range of Tempera- ture.	Mean Daily Range of Tempera- ture.	Mean Tempera- ture of the Air.	Mean Degree of Hu- midity.	WIND.				Mean Amount of Cloud.	RAIN.	
									Mean estimated Strength.	Relative Proportion of				Number of Days on which it fell.	Amount collected.
										N.	E.	S.	W.		
Guernsey	29.791	61.5	27.5	34.0	25.8	7.9	42.2	79	2.0	29	26	14	21	35	in. 4.5
Helston	29.843	65.0	29.0	36.0	29.0	11.1	45.5	87	2.1	19	30	20	21	45	7.4
Exeter	29.850	68.7	19.8	48.9	36.5	12.8	41.4	85	1.8	29	22	22	17	56	4.1
Ventnor	29.926	64.0	26.0	38.0	29.3	9.3	42.5	81	....	14	38	14	24	29	4.2
Worthing	29.882	59.6	25.0	34.6	25.8	9.4	39.8	88	0.9	24	27	16	23	20	2.8
Barnstaple	29.825	69.0	23.0	46.0	34.3	12.0	42.0	87	1.3	18	28	21	23	36	3.6
Clifton	29.898	66.3	20.9	45.4	36.0	11.6	38.6	84	0.9	16	31	17	26	36	3.3
Royal Observatory	29.916	68.7	20.9	47.8	35.1	13.7	37.8	83	....	20	23	20	30	19	3.3
St. Thomas's Hos.	29.882	62.4	26.2	46.2	27.5	9.1	39.3	81	1.6	23	22	14	31	17	3.1
Oxford	29.910	66.6	13.0	53.6	37.7	12.4	37.7	88	1.2	21	27	16	26	27	3.3
Hartwell Rectory	29.876	68.0	19.0	49.0	35.4	13.6	37.9	85	1.2	21	19	23	27	23	2.8
Royston	29.933	68.2	19.2	49.0	36.2	14.0	37.9	83	....	21	19	23	27	46	2.9
Lampeter	29.858	71.0	12.8	58.2	42.2	12.9	39.9	88	0.7	14	25	26	25	41	5.3
Norwich	29.899	65.0	19.0	46.0	34.3	12.9	37.5	85	1.6	....	....	....	....	27	....
Derby	29.881	63.0	17.0	46.0	33.0	12.5	38.7	86	....	....	....	....	....	27	1.3
Holkham	29.893	66.3	16.6	49.7	37.6	12.0	38.1	86	1.4	15	19	31	25	25	3.1
Nottingham	29.906	69.5	16.5	53.0	38.2	15.8	38.3	84	0.4	15	21	21	33	20	1.3
Liverpool	29.913	58.4	26.6	31.8	26.8	8.9	40.1	81	1.1	....	....	....	....	24	2.6
Manchester	29.877	67.0	15.0	52.0	39.2	15.1	38.0	89	....	14	25	24	27	36	3.7
Wakefield	29.890	66.9	16.5	50.4	39.5	14.6	38.3	86	1.9	17	19	21	33	37	3.0
Stonyhurst	29.861	61.9	19.2	42.7	34.2	11.7	37.7	86	0.8	17	21	16	36	37	....
York	29.849	64.0	17.0	47.0	35.8	11.2	36.8	95	....	10	28	21	31	13	2.3
Scarborough	29.842	55.5	20.0	35.5	28.1	7.3	39.2	91	3.2	19	18	22	31	....	....
North Shields	29.918	61.2	16.5	44.7	34.0	9.9	38.0	88	2.0	20	12	26	32	4.8	....
Allenheads	29.810	58.2	13.5	44.7	33.1	11.2	34.3	90	2.2	15	18	16	41	49	7.0

IMPORTS.—(United Kngdm.)—*First Three Months (Jan.—Mch.) 1858-7-6.*
Computed Real Value of Articles of Foreign and Colonial Merchandize
Imported. (See Note, p. 201 ante.)

(First Three Months.) FOREIGN ARTICLES IMPORTED.		1858.	1857.	1856.
		£	£	£
RAW MATLS.— <i>Textile.</i>	Cotton Wool	4,263,000	6,167,000	5,099,000
	Wool (Sheep's) ..	763,000	1,117,000	872,000
	Silk	1,217,000	3,908,000	1,093,000
	Flax	175,000	371,000	266,000
	Hemp	97,000	99,000	127,000
	Indigo	173,000	186,000	120,000
		6,688,000	11,848,000	7,577,000
" " <i>Various.</i>	Hides	233,000	590,000	335,000
	Oils	419,000	490,000	672,000
	Metals	351,000	739,000	515,000
	Tallow	273,000	331,060	368,000
	Timber	380,000	618,000	467,000
		1,656,000	2,768,000	2,357,000
" " <i>Agricltl.</i>	Guano	666,000	109,000	666,000
	Seeds	340,000	264,000	499,000
		1,006,000	373,000	1,165,000
TROPICAL, &C., PRODUCE.	Tea	946,000	1,478,000	1,091,000
	Coffee	189,000	154,000	86,000
	Sugar & Molasses	1,621,000	2,253,000	1,522,000
	Tobacco	185,000	300,000	218,000
	Rice	289,000	142,000	265,000
	Fruits	89,000	244,000	56,000
	Wine	379,000	696,000	337,000
	Spirits	168,000	699,000	202,000
		3,866,000	5,966,000	3,877,000
FOOD	Grain and Meal..	3,797,000	3,675,000	2,786,000
	Provisions	598,000	941,000	670,000
		4,395,000	4,616,000	4,456,000
Remainder of Enumerated Articles		530,000	854,000	623,000
TOTAL ENUMERATED IMPORTS....		18,141,000	26,425,000	20,055,000

The "Enumerated Imports" are equal to say 80 per cent. of the Total Imports.

EXPORTS.—(United Kngdm.)—*First Three Months (Jan.—Mch.) 1858-7-6.*
Declared Real Value of Articles of British and Irish Produce and Manufactures Exported. (See Note, p. 201 ante.)

(First Three Months.) BRITISH PRODUCE, &c., EXPORTED.		1858.	1857.	1856.
		£	£	£
MANURES.—Textile.	Cotton Manufactures..	6,981,000	7,664,000	6,723,000
	„ Yarn	2,144,000	1,787,000	1,931,000
	Woollen Manufactures	1,941,000	2,674,000	2,155,000
	„ Yarn	450,000	581,000	643,000
	Silk Manufactures ...	320,000	767,000	537,000
	„ Yarn	39,000	99,000	56,000
	Linen Manufactures....	970,000	1,249,000	1,158,000
	„ Yarn	317,000	389,000	311,000
		13,162,000	15,210,000	13,514,000
	„ Sewed.			
	Apparel	374,000	431,000	358,000
	Haberdry. and Millary	755,000	1,080,000	884,000
		1,129,000	1,511,000	1,242,000
METALS	Hardware and Cutlery	679,000	903,000	790,000
	Machinery	659,000	678,000	480,000
	Iron	1,912,000	2,973,000	2,579,000
	Copper and Brass.....	645,000	675,000	608,000
	Lead and Tin	389,000	598,000	452,000
	Coals and Culm	564,000	607,000	520,000
		4,848,000	6,434,000	5,429,000
Ceramic Manufcts.	Earthenware and Glass	370,000	510,000	447,000
Indigenous Mnftrs.	Beer and Ale	452,000	467,000	382,000
	Butter	100,000	144,000	151,000
	Cheese	13,000	32,000	24,000
	Candles	27,000	73,000	42,000
	Salt	40,000	70,000	70,000
	Spirits	51,000	253,000	160,000
	Soda	134,000	147,000	121,000
		817,000	1,196,000	950,000
Various Manufcts.	Books, Printed.....	87,000	103,000	81,000
	Furniture	57,000	60,000	34,000
	Leather Manufactures	436,000	512,000	331,000
	Soap	39,000	62,000	64,000
	Plate and Watches ...	113,000	121,000	89,000
	Stationery.....	166,000	178,000	146,000
		898,000	1,036,000	745,000
	Remainder of Enumerated Articles	600,000	737,000	832,000
	Unenumerated Articles	1,686,000	2,193,000	1,990,000
	TOTAL EXPORTS	23,510,000	28,827,000	25,149,000

SHIPPING.—FOREIGN TRADE.—(United Kingdom).—*First Three Months (Jan—March) of the Years 1858, '57, and '56. Vessels Entered and Cleared with Cargoes, including repeated Voyages, but excluding Government Transports.*

(First Three Months.)	1858.			1857.		1856.	
	Vessels.	Total Tonnage.	Average Tonnage.	Vessels.	Total Tonnage.	Vessels.	Total Tonnage.
ENTERED:—							
<i>Vessels belonging to—</i>	No.	Tons.	Tons.	No.	Tons.	No.	Tons.
United Kingdom and Dependencies	3,397	894,320	263	3,256	893,010	3,117	840,490
Russia	10	3,770	377	14	2,620	....	....
Sweden	36	8,640	240	36	7,900	32	6,490
Norway	149	35,990	242	202	39,130	303	54,990
Denmark	204	24,230	119	406	40,870	228	22,480
Prussia and other German States	235	69,040	294	457	83,690	312	55,050
Holland and Belgium ..	184	30,790	167	292	49,060	250	38,280
France	558	44,550	80	223	16,590	218	13,150
Spain, Portugal, and Italy	210	56,810	270	105	24,600	120	23,930
Other European States ..	48	12,140	253	5	1,580	23	6,830
United States	255	255,580	1,002	279	275,260	253	254,930
Other States, America, Asia, and Africa	3	1,670	557	6	2,310	6	1,690
Totals Entered	5,289	1,437,530	272	5,281	1,436,620	4,862	1,318,310
—CLEARED:—							
United Kingdom and Dependencies	4,342	1,151,550	265	5,404	1,363,980	4,834	1,199,950
Russia	51	19,080	374	30	8,930	....	....
Sweden	87	25,070	288	88	25,630	89	23,760
Norway	109	27,220	250	145	39,010	287	68,160
Denmark	222	29,420	132	419	49,670	355	38,530
Prussia and other German States	302	86,230	285	578	117,780	533	99,530
Holland and Belgium ..	225	52,150	232	341	64,980	330	55,600
France	765	91,550	120	582	65,770	786	75,130
Spain, Portugal, and Italy	356	106,710	298	138	38,710	146	28,810
Other European States ..	75	19,680	262	1	300	32	9,740
United States	225	204,480	909	331	319,050	313	291,530
Other States, America, Asia, and Africa	5	2,210	442	4	1,800	5	1,910
Totals Cleared	6,764	1,815,350	268	8,061	2,095,610	7,710	1,892,650

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.
 —(United Kingdom).—*Computed Real Value for the First Three Months*
(Jan.—March) of the Year 1858. (See Note, p. 201 ante.)

(First Three Months. 1858.)	Gold.	Silver.	TOTAL.
IMPORTED FROM :—			
	£	£	£
Hanse Towns, Holland, and Belgium....	985,000	219,000	1,204,000
France	331,000	933,000	1,264,000
Portugal, Spain, and Gibraltar	99,000	146,000	245,000
Malta, Turkey, and Egypt	584,000	9,000	593,000
West Coast of Africa	24,000	4,000	28,000
China	27,000	69,000	96,000
Australia	1,801,000	....	1,801,000
South America and West Indies	1,389,000	960,000	2,349,000
United States	2,557,000	78,000	2,635,000
Other Countries	14,000	22,000	36,000
Totals Imported ...	7,811,000	2,440,000	10,251,000
EXPORTED TO :—			
Hanse Towns, Holland, and Belgium....	150,000	556,000	706,000
France	2,097,000	68,000	2,165,000
Portugal, Spain, and Gibraltar	52,000	....	52,000
India and China (via Egypt)	42,000	2,059,000	2,101,000
South Africa	60,000	2,000	62,000
Mauritius.....	61,000	15,000	76,000
Danish West Indies	7,000	41,000	48,000
United States	11,000	....	11,000
Brazil	69,000	9,000	78,000
Other Countries	2,000	3,000	5,000
Totals Exported....	2,551,000	2,753,000	5,304,000

REVENUE.—QUARTER ENDED 31st MARCH, 1858.

An Abstract of the Net Produce of the REVENUE of the United Kingdom in the YEARS and QUARTERS ended 31st March, 1858 and 1857.—(Continued from page 110, ante.)

YEARS ended 31st March.				
Sources of Revenue.	1858.	1857.	Increase.	Decrease.
	£	£	£	£
Customs	23,109,104	23,321,843	....	212,739
Excise	17,825,000	18,165,000	....	340,000
Stamps	7,415,719	7,372,209	43,510	....
Taxes.....	3,152,033	3,116,046	35,987	....
Property Tax.....	11,586,115	16,089,934	....	4,503,819
Post Office.....	2,920,000	2,886,000	34,000	....
Crown Lands.....	276,654	284,857	....	8,203
Miscellaneous	1,596,887	1,098,173	498,714	....
Totals	67,881,512	72,334,062	612,211	5,064,761
			Net Decr. £4,452,550	

QUARTERS ended 31st March.				
Sources of Revenue.	1858.	1857.	Increase.	Decrease.
	£	£	£	£
Customs	5,888,352	5,243,600	644,752	....
Excise	3,251,000	2,898,000	353,000	....
Stamps	2,051,973	1,905,477	146,496	....
Taxes.....	308,033	260,020	48,013	....
Property Tax.....	3,390,601	6,942,483	....	3,551,882
Post Office.....	705,000	777,000	....	72,000
Crown Lands.....	70,000	67,000	3,000	....
Miscellaneous	345,360	425,569	....	80,209
Totals	16,010,319	18,519,149	1,195,261	3,704,091
			Net Decr. £2,508,830	

REVENUE (UNITED KINGDOM).—QUARTER ENDED 31st MARCH, 1858 :—APPLICATION.

An Account showing the REVENUE and other RECEIPTS of the QUARTER ended the 31st of March, 1858; the Application of the same, and the Charge of the Consolidated Fund for the said Quarter, together with the Surplus or Deficiency upon such Charge.

Surplus Balance beyond the Charge of the Consolidated Fund for the Quarter ended 31st December, 1857, viz. :—	£		Net Amount applied out of the Income for the Quarter ended 31st March, 1858, to Redemption of Exchequer Bills (Deficiency) for the Quarter ended 31st December, 1857, viz. :—	£
Great Britain	£782,168		Total Deficiency	£1,211,623
Ireland	782,168		Abate—Redeemed by Sinking Fund	121,000
				1,090,623
Income received in the Quarter ended 31st March, 1858, as shown in page 218	16,010,319		Amount Applied out of the Income to Supply Services in the Quarter ended 31st March, 1858	9,196,519
Money received by sale of Exchequer Bills (Supply) issued to replace (in part) the Amount of Bills paid off in Money out of the Ways and Means of the Year 1857-8	288,600		Charge on the Consolidated Fund for the Quarter ended 31st March, 1858, viz. :—	
Amount received in the Quarter ended 31st March, 1858, in repayment of Advances for Public Works, &c.	431,268		Interest of the Permanent Debt	£5,577,130
Saving on the Charge for Diplomatic Salaries for the Year 1857 ..	596		Terminable Debt	1,399,985
			Interest of Exchequer Bills (Deficiency)	—
			The Civil List	101,111
			Other Charges on Consolidated Fund	348,636
			Advances for Public Works, &c.	254,170
			Sinking Fund	269,024
				7,940,056
Balance, being the Deficiency on 31st March, 1858, upon the charge of the Consolidated Fund in Great Britain, to meet the Dividends and other Charges payable in the quarter to 30th June, 1858, and for which Exchequer Bills (Deficiency) will be issued in that Quarter	1,301,420		Surplus balance beyond the charge of the Consolidated Fund for the Quarter ended 31st March, 1858, viz. :—	
			Great Britain	—
			Ireland	486,773
				486,773
				£18,714,371

CORN.—Gazette Average Prices, (ENGLAND AND WALES,) during each Week of the First Quarter of 1858; together with the MONTHLY and QUARTERLY Average.

[Communicated by H. F. JADIS, Esq., Comptroller of Corn Returns.]

Weeks ended Saturday, 1868.		Weekly Average. (Per Impl. Quarter.)					
		Wheat.	Barley.	Oats.	Rye.	Beans.	Pears.
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1868.—January	2.....	47 7	35 10	22 3	32 1	39 3	39 4
"	9.....	47 10	36 3	22 8	33 6	39 3	40 5
"	16.....	48 8	37 -	22 1	33 7	39 3	39 11
"	23.....	48 9	37 6	22 4	32 -	39 4	39 5
"	30.....	47 6	37 1	23 1	34 10	39 5	40 4
Average for January, 1868		48 -	36 8	22 5	33 2	39 3	39 10
1868.—February	6.....	46 9	36 8	23 -	31 2	38 11	41 -
"	13.....	46 8	36 3	22 8	30 9	39 3	41 1
"	20.....	44 6	35 9	22 10	34 3	38 2	40 2
"	27.....	45 -	35 11	22 4	35 -	38 4	40 6
Average for February, 1868		45 6	36 1	22 8	32 9	38 8	40 8
1868.—March	6.....	46 6	36 7	23 4	34 -	37 11	41 -
"	13.....	45 8	36 6	23 3	31 3	37 11	41 2
"	20.....	46 6	36 9	23 4	31 9	37 11	41 -
"	27.....	46 2	37 3	23 4	29 11	38 1	41 5
Average for March, 1868 ..		45 4	36 9	23 3	31 8	37 11	41 5
Average for the Quarter ...		46 5	36 6	22 9	32 7	38 8	40 6

LONDON STOCK AND SHARE MARKETS.—JAN., FEB., MCH., 1858.

Stocks and Railway Shares.	Amt. of Share.	Amt Paid.	PRICE ON THE			Highest Price during			Lowest Price during		
			1 Jan.	1 Feb.	1 Mar.	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
Consols.....	...	...	93½ to 94½	95½	97½	95½	97½	97½	93½	95½	96½
Exchequer Bills .....	...	...	Par to 3s. pm.	23s. pm.	40s. pm.	26s. pm.	41s. pm.	42s. pm.	Par.	18s. pm.	34s. pm.
Brighton	Stock	100	108	107	108½	112½	108½	108½	107½	106	104
Caledonian	"	"	85½	93½	94½	93½	97½	94½	85½	93½	85½
Eastern Counties	"	"	60	59½	61½	63½	62½	61½	59½	58½	57½
Great Northern	"	"	98	102½	101½	106½	105½	104½	97½	102½	101
Great Western	"	"	56½	59½	60½	63	62½	61	55	57½	57½
London & North-Western	"	"	98½	99½	98½	102½	101½	99½	97½	97½	98½
Midland	"	"	92	93½	98½	95½	100	99½	91½	92½	94½
Lancashire and Yorkshire	"	"	94½	91½	93½	97	94½	93½	93½	90½	87½
North Staffordshire	"	17½	39½	40½	40½	41½	41½	40½	38½	39½	35½
South-Eastern	Stock	100	72½	72½	73½	76½	75½	73½	72½	71½	68½
South-Western	"	"	97½	96½	96	100	97½	96	96½	94½	90
North-Eastern—Berwick	"	"	98	95½	96	100	97	96½	97	94½	90
" York	"	"	86	83	80½	87½	83	81½	83½	80	71½
Northern of France.....	20	16	38½	38½	38½	39½	39½	38½	37½	37½	37½
East Indian	Stock	100	113	108½	110½	114½	113½	110½	109½	108	107½

BANK OF ENGLAND.—WEEKLY RETURN.

An Account, pursuant to the Act 7th and 8th Victoria, c. 32, for each Week ending on a Wednesday, during the First Quarter (Jan.—Mch.) 1858.

1.	2.	3.	4.	5.	6.	7.
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.	DATES.	Assets.			Notes in Hands of Public.	Minimum Rates of Discount at Bank of England.
Notes Issued.	(Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	(Col. 1 minus col. 16.)	
Mins. £	1858.	Mins. £	Mins. £	Mins. £	Mins. £	1858. Per Cent.
26,59	Jan. 6	11,01	3,46	12,12	19,50	1 Jan. 8
27,21	" 13	11,01	3,46	12,74	19,67	
28,22	" 20	11,01	3,46	13,75	20,02	7 " 7
29,08	" 27	11,01	3,46	14,61	19,67	
29,44	Feb. 3	11,01	3,46	14,97	20,07	14 " 6
30,22	" 10	11,01	3,46	15,75	19,60	
31,01	" 17	11,01	3,46	16,54	19,70	
31,29	" 24	11,01	3,46	16,82	19,45	28 " 4
31,26	Mar. 3	11,01	3,46	16,78	20,04	
31,37	" 10	11,01	3,46	16,89	19,50	4 Feb. 3½
31,55	" 17	11,01	3,46	17,08	19,20	
32,32	" 24	11,01	3,46	17,84	19,31	
32,28	" 31	11,01	3,46	17,80	19,95	11 " 3

BANKING DEPARTMENT.

8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
Liabilities.					Datrs. (Wdnedsdys.)	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.				Government.	Other.	Notes.	Gold and Silver Coin.
Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	1858.	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £
14,55	3,61	7,19	14,84	,85	Jan. 6	7,76	25,66	7,69	,53	41,04
14,55	3,65	2,99	19,12	,88	" 13	9,19	23,85	7,54	,62	41,20
14,55	3,69	2,81	18,39	,89	" 20	9,19	22,25	8,20	,69	40,33
14,55	3,70	3,25	18,17	,86	" 27	9,29	21,05	9,41	,79	40,54
14,55	3,72	3,65	17,03	,87	Feb. 3	9,56	20,07	9,37	,82	39,83
14,55	3,81	4,25	16,21	,85	" 10	9,70	18,52	10,62	,83	39,67
14,55	3,82	4,56	15,78	,88	" 17	9,86	17,63	11,31	,79	39,59
14,55	3,68	5,10	15,50	,88	" 24	9,91	17,16	11,84	,80	39,71
14,55	3,88	5,19	14,73	,90	Mar. 3	9,90	17,31	11,22	,83	39,26
14,55	3,89	5,98	13,90	,89	" 10	9,90	16,62	11,87	,82	39,21
14,55	3,89	6,58	13,77	,88	" 17	9,90	16,56	12,35	,86	39,67
14,55	3,89	7,69	13,57	,89	" 24	9,90	16,80	13,01	,89	40,60
14,55	3,90	7,63	12,99	,84	" 31	9,90	16,85	12,33	,82	39,91

CIRCULATION.—COUNTRY BANKS.

Average amount of Promissory Notes in Circulation in ENGLAND and WALES, for the last Week ended on a Saturday, in the Fourth Quarter of 1857, and for each Week ended on a Saturday during the First Quarter (January—March) of 1858; and also the Average of Promissory Notes in Circulation in SCOTLAND and IRELAND during the Four Weeks ended on the 16th January, the 13th February, and the 13th March, 1858.

ENGLAND AND WALES.				SCOTLAND.				IRELAND.		
DATES.	Private Banks. (Fixed Issues, 4'40.)	Joint Stock Banks. (Fixed Issues, 8'30.)	TOTAL. (Fixed Issues, 7'70.)	Four Weeks, ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 3'09.)	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6'35.)
1857.	Mins. £	Mins. £	Mins. £	1858.	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £
Dec. 26	3,02	2,43	5,45							
1858.										
Jan. 2	3,04	2,40	5,44							
" 9	3,14	2,50	5,64							
" 16	3,20	2,56	5,76	Jan. 16	1,54	2,48	4,02	2,86	3,08	5,94
" 23	3,20	2,56	5,76							
" 30	3,15	2,53	5,68							
Feb. 6	3,12	2,53	5,65							
" 13	3,10	2,54	5,64							
" 20	3,08	2,55	5,63	Feb. 13	1,43	2,32	4,75	2,96	3,21	6,17
" 27	3,05	2,55	5,60							
Mar. 6	3,06	2,55	5,60							
" 13	3,05	2,57	5,62							
" 20	3,07	2,62	5,69							
" 27	3,15	2,70	5,85	Mar. 13	1,35	2,23	3,58	2,98	3,22	6,19

An Account, showing the HIGHEST, and the LOWEST, and the MEAN PRICE of THREE PER CENT. CONSOLS, during each Year, in the Nine Years ending the 5th day of April, 1856.

Periods.	Highest Price.		Lowest Price.		Mean Price.
		£ s. d.		£ s. d.	£ s. d.
From 6 Apr. 1847 to 5 Apr. 1848	1848, Feb. 18	90 - -	1847, Oct. 19	78 15 -	84 7 6
" 1848 " 1849	1849, Feb. 18	94 10 -	1848, Apr. 6	80 - -	87 5 -
" 1849 " 1850	1849, Dec. 14	97 17 6	1849, May 19	90 12 6	94 5 -
" 1850 " 1851	1850, Dec. 13	98 10 -	1850, May 17	95 - -	96 15 -
" 1851 " 1852	1851, Nov. 20	99 2 6	1851, Sept. 15	95 12 6	97 7 6
" 1852 " 1853	1853, Dec. 11	101 12 6	1852, Apr. 6	98 15 -	100 3 9
" 1853 " 1854	1853, Apr. 26	101 - -	1854, Mar. 30	85 2 6	93 1 3
" 1854 " 1855	1854, Sept. 12	95 17 6	1854, Apr. 6	86 17 6	91 7 6
" 1855 " 1856	1856, Apr. 1	93 5 -	1856, Jan. 14	85 12 6	89 8 9

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY.

SEPTEMBER, 1858.

On the Statistics of INDIAN REVENUE and TAXATION.

By FREDERICK HENDRIKS.

[Read before the Statistical Society, 18th May, 1858.]

	PAGE		PAGE
Introductory Remarks	223	D.—Indirect and direct Taxation of India in the year 1855-56	237
I.—Present condition of the Indian Revenue.	225	E.—Taxation and total Revenue. Per Centages for each Presidency, and average incidence per head upon the total population, in the year 1855-56	240
II.—Productive, financial, and industrial condition of India	241	F.—Public Debts of the Presidencies of India, and Home Debts of the East India Company	249
III.—Fiscal conditions that regulate Indian finance compared with those applicable to British finance	258	G.—Analysis of items of Indian Debt	250
IV.—Facts and Statistics bearing upon the past history and progress of Revenue and Taxation in British India, during the Sixty-Four Years 1792-3 to 1855-6....	270	H.—Parallelisms of the Indian and English systems of Revenue and Taxation	260
TABULAR STATEMENTS.		J.—Taxes repealed in Sind from 1843 to 1846	264
A.—Total Revenue derived from all sources, in each Presidency and in the whole of British India, in One Year, 1855-56 ...	226	K.—Average Annual Revenue derived from all sources, with per centage proportions, for all India, 1792-3 to 1861-2 ...	272
B.—Per Centages of the Revenue from each source, to the total Revenue raised, in each Presidency, &c., 1855-56	228	L.—Summary of ditto, 1792-3 to 1855-6	275
C.—Summary of the Area and Population of India	234	M.—Totals of the Revenue of India for sixty-four years, 1792-93 to 1855-56	276
		N to S.—Area and Population of the Land Revenue Collectrates in the several governments of India	289

Introductory Remarks.

INDIAN REVENUE STATISTICS have usually been regarded as anything but an attractive subject of study. The causes which, until a very recent period, induced an apathetic distaste to the discussion of the details of any branch of Indian administration, told with, if possible, greater force, when the Revenue or system of Taxation was in question. The intricacies of Land Tenures, the controversies they had given rise to, and the somewhat too profuse employment of Indian legal and fiscal terms worded in different vernaculars, contributed in no mean degree to this result.

The rapid march of the great and stirring events of which India has lately been, and still is, the theatre—the example which the East India Company, and those officially connected with India in Parliament have vied with each other in enforcing on the public, as to the urgent need of a more popular and a wider spread study of the

elements of Indian finance—all justify an impression, that efforts to simplify and explain the special nature of those elements will not be looked upon with as much indifference as was formerly their fate.

These observations must be understood as made in a general sense, the Statistical Society having uniformly proved, for the last twenty years or more, that it did not share in the prevalent unconcern on Indian topics.

A full consideration of the leading branches of Indian Revenue, from a British point of view, appears to divide itself as follows, into distinct, but at the same time intimately connected, heads of enquiry, respecting :—

(1). The present condition of the Indian Revenue; the pressure of Taxation, and the territorial area and extent of population from which it is raised.

(2). The productive, financial, and industrial condition of India; and the degree in which experience and facts have shown it to be susceptible of improvement through the promotion of agriculture and public works; better means of irrigation and transit by canals and railways; and an amended system of Land Settlement.

(3). The fiscal conditions that regulate Indian finance, compared with those applicable to British finance.

(4). The facts and Statistics bearing upon the past history and progress of Revenue and Taxation in British India, during the Sixty-Four Years 1792-3 to 1855-6.

The risks of too broad a generalization upon data really applicable only to a limited portion of surface, are both numerous and perplexing, and, unless extreme care be used, may lead to mistaken deductions upon many of the branches comprised in the Revenue administration of so vast an empire, including territory nearly seven times as extensive, and population nearly five times as numerous, as Great Britain. It must also be kept in recollection how widely the distinct nations comprised in this empire differ in origin, temperament, language, and industry, and in their respective advance in civilization; and what various influences they are subject to, of climate, soil, hereditary custom, and caste.

Civilians who have had the advantage of practical experience in the service of the East India Company abroad, are not necessarily more free from the entanglement of such causes of error, than the enquirer at home. They are frequently imbued with views on Indian administrative points, correct enough so far as relates to the particular localities of one Presidency, but by no means deserving that character when applied to the formation of a judgment upon the circumstances of other Presidencies. Of the latter they may not, perhaps, possess any local knowledge whatever. The races of people, their agricultural, industrial, and social condition may be quite dif-

ferent from those of the inhabitants of the part of India where the official life of these civilians has been spent.

On the other hand, in England, we are chiefly dependent on the information and instruction upon Indian topics derivable from documentary evidence of facts and figures. These are not to be found in excess, in a published form. Rather the contrary; and there is certainly wanting a condensed Report, for each Presidency, upon the same order and classes of statistical facts, illustrative of their agriculture, trade, manufactures, prices, markets, means of communication, and rates of wages for skilled and for general labour. The differences in the social, family, and conjugal, condition of the people; and last, but not least, a sufficiently near approximate estimate of their wealth, in real and personal property, all deserve and demand investigation. It may be true that to set on foot, and carry out, such an inquiry and report, would be an expensive and laborious undertaking; but there is reason to infer that it would repay itself a thousandfold, and contribute to the material prosperity, and through that to the moral wellbeing, of the population of India, to an extent which even the sanguine would not be found to have over estimated.

Proceeding with our outline of the subject before us, and promising that the utmost it will be endeavoured to accomplish is to lay down some general principles on which it may be discussed by this Society; we have at the outset to confine our attention to the first topic of inquiry that has been alluded to, *viz.* :—

I.—The present condition of the Indian Revenue, the pressure of Taxation, and the territorial area and extent of population from which it is raised.

The latest period for which complete accounts have been received and published by the East India House, are for the year ended 30th April, 1856. The position of the various branches of Revenue since that date is not supposed to have materially altered, and no serious error will ensue from viewing the Revenue for the financial year 1855-56, as about representing its present position.

In Indian Accounts the different rates of exchange for the Rupee cause some apparent discrepancy in the separate returns of total income and expenditure, and of surplus or deficiency.

The basis of the following first TABLE A, is the Parl. Ret. (16/57). In this Return, as in the one of which it is a continuation (386/55), the Items are reduced to Sterling, at the rate of 2s. per Rupee, throughout, so that the conversion can be brought from one denomination to the other by the rules of decimal notation.

For clearness of reading this, and the other tables which follow, as well as for convenience of printing, it has been found expedient to discard the units, tens, and hundreds, and to express each Item

in Millions and Thousands of Pounds only, so that three ciphers, 000, are to be added at the right hand of each Sum.*

TABLE A.

TOTAL REVENUE *derived from all sources, in each PRESIDENCY and in the whole of BRITISH INDIA, in One Year, 1855-56.*

1	2	3	4	5	6	7
Separate Branches of Revenue.	Presidency.					Whole of British India.
	Bengal.	No.-Wstn. Provinces.	Madras.	Bombay.	Punjab.	
	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £
1. Land Revenue	4·668	5·000	3·642	2·846	0·954	17·110
2. Sayer Revenue (or Sundry Items of mixed direct and indirect Taxation))	0·499	0·303	0·247	0·116	0·079	1·244
3. Excise	0·045	....	....	....	....	0·045
4. Moturpha (or Pro- perty and Income Tax, recently dis- continued) )	....	....	0·109	....	....	0·109
5. Salt Tax	1·082	0·549	0·541	0·275	0·204	2·651
6. Opium Revenue	4·172	....	....	1·024	....	5·196
7. Post Office	0·045	0·087	0·059	0·022	0·024	0·237
8. Stamp Duties	0·223	0·169	0·071	0·069	0·020	0·552
9. Customs	1·541	0·078	0·140	0·348	....	2·107
10. Mint Duties	0·119	....	0·019	0·058	....	0·196
11. Miscellaneous (in- cluding Tribute from Native States, Pilots, Toll, and Ferry Dues))	0·625	0·074	0·459	0·195	0·017	1·370
Total Gross Revenue	13·019	6·260	5·287	4·953	1·298	30·817
Total Gross Charges	13·768	2·533	5·537	5·123	1·411	28·372
Net Indian Surplus .....	....	3·727	....	....	....	2·445
Net Indian Deficiency....	0·749	....	0·250	0·170	0·113	....

* As examples; in col. 2 of the annexed TABLE A, it will be found that the Land Revenue for Bengal was (in the year 1855-56) 4·668 Mins. £. In other words, it was 4,668,000*l.*, the exact figures of the account being 4,668,156*l.* Again, in col. 6, under the head of Stamp Duties, the receipts in the Punjab are given at 0·020 Mins. £; meaning 20,000*l.*, the precise figures of the original account making them 20,167*l.*

Every item of this TABLE A will be more fully referred to in the fourth, or last, part of this paper; in which a brief account will be given of the progress of the separate branches of Revenue during the Sixty-Four years 1792-3 to 1855-56, with calculated annual averages for each five years. At the present first step in our inquiry it will be well not to encumber it with too many figures. What we want at the outset is an approximate and condensed view of the amount of Revenue and its distribution over the several great divisions of India; without reference to any consideration of what part of such Revenue is Taxation pressing upon the people, and of what part is Government Income, the pressure of which does not fall upon them. This will be presently discussed. In the meanwhile let us restrict ourselves to observing that if we recapitulate from TABLE A the Items of Gross Revenue from the several Presidencies, viz. :—

	£
1. Bengal	13,019,000
2. North-West Provinces	6,260,000
3. Madras	5,287,000
4. Bombay	4,953,000
5. Punjab	1,298,000
we arrive at a total for India of 30,817,000 <i>l.</i> of Gross Revenue.	

A line has been added to this, and to the other Tables, showing the Gross Charges, another showing the Indian Surplus or Deficiency. This is to be understood as irrespective of the receipts and disbursements of the Home Treasury for its establishments and liabilities in England.

With these explanations, we may now revert to the figures of TABLE A. And the immediate question of most importance, on the face of those figures, is the ascertainment of the proportion which each source of Revenue bears to the total raised. The per centage calculations are contained in the next TABLE B; and, under the fourth head of our inquiry, will be found Tables for which the Per Centage proportions have been similarly computed for the several quinquennial periods from 1792-3 to 1855-6. These will be useful for reference, and will show, far better than undigested figures, the fluctuations between those dates. We have, however, at the moment, to restrict our attention more particularly to TABLE B.

It will be observed how wide a range of difference exists in the proportions of the several sources of Revenue. For instance, the *Land-Tax* (so called) contributes less than 36 Per Cent. of the total Revenue in Bengal, and in the North-West Provinces nearly 80 Per Cent., whilst the average for India is about 55½ per Cent. The *Salt-Tax* is nearly 16 Per Cent. of the total Revenue in the Punjab, whilst in Bombay it contributes only 5½ per Cent. of its Revenue, the average for India approaching 8½ per Cent. Next the *Opium*

Revenue does not exist at all in the North-West Provinces, Madras, or the Punjab, but covers 32 Per Cent., or not far short of $\frac{1}{3}$ rd of the Bengal Revenue, and 21 per Cent., or more than $\frac{1}{4}$ th of the Bombay Revenue, and quite $\frac{1}{4}$ th of the whole Indian Revenue. Then the *Customs*, which are under 7 Per Cent., or less than $\frac{1}{10}$ th of the Indian Revenue, do not contribute anything to the Punjab Revenue, only make up $1\frac{1}{2}$ per Cent. of the North-West Provinces Revenue, and at their maximum in Bengal are under 12 per cent. The last of the larger Items is the *Miscellaneous Revenue*, including Tributes from native states, &c., and it averages $4\frac{1}{2}$ per Cent. for India, is not much more than 1 Per Cent. in the North-West Provinces, but reaches $8\frac{1}{2}$ per Cent. in Madras.

TABLE B.

PER CENTAGES of the REVENUE FROM EACH SOURCE to the Total Revenue raised, in each Presidency of INDIA; in the Year 1855-56, (calculated from TABLE A.)

	1	2	3	4	5	6	7
Separate Sources of Revenue.	Presidency.					Whole of British India.	
	Bengal.	No.-Wstn. Provinces.	Madras.	Bombay.	Panjab.		
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	
1. Land.....	35·83	79·87	68·91	57·43	73·50	55·52	
2. Sayer (For ex- planation, see Table A)	3·83	4·84	4·67	2·34	6·00	4·04	
3. Excise	·35	....	....	....	....	·15	
4. Moturpha (For explanation, see Table A) .....	....	....	2·06	....	....	·35	
5. Salt	8·31	8·77	10·24	5·55	15·71	8·60	
6. Opium	32·04	....	....	20·67	....	16·86	
7. Post Office	·35	1·39	1·12	·45	1·85	·77	
8. Stamp Duties	1·72	2·70	1·34	1·40	1·54	1·79	
9. Customs	11·84	1·25	2·63	7·03	....	6·83	
10. Mint Duties	·91	....	·35	1·17	....	·64	
11. Miscellaneous (For explanation, see Table A)	4·80	1·18	8·68	3·94	1·31	4·45	
Total Revenue.....	100°	100°	100°	100°	100°	100°	

Statistical calculations of the *pressure of Taxation* on each head of the population, and on each square mile of territory, in certain

parts of India, were recently (Feb. 1858) submitted to Parliament. (See Return 86, of 1858). The object was to enable comparison with the relative weight, as measured in money, of the incidence of Taxation in the United Kingdom. The figures given of the pressure on each inhabitant of the North-Western Provinces (Regulation and Non-Regulation) are 8s. 3½d., and on each inhabitant of the Bombay Presidency 8s. 9½d. The first of these results is based upon the ratio to the number of inhabitants, of the aggregate of six items, viz.: Land Revenue, Abkaree or Spirit licenses, Stamps, Miscellaneous Revenue, Sayer Revenue (a technical term signifying items of direct and indirect taxation not included in miscellaneous revenue), and Customs Duties. The other result is based on two items only, viz.: Land and Sayer Revenues.

But the question at once arises, if, in either of these examples, the first and largest item, of Land Revenue, or so called Land-Tax, should be included in the estimate?

This amounts to an inquiry, whether Land in India is taxed at all.

It may readily be admitted that whenever and wherever—under Hindoo or Mussulman despotism, or under British rule—the Land Revenue, paid to the government out of the produce of the soil, in money or in kind, exceeded a fair amount of Rent, the excess beyond that normal or natural rent, was, practically as well as nominally, a Tax. But, if we admit this argument, we must reject that undue extension of its premiss which would include the normal rent, or any amount less than the normal rent, in the designation of a tax.

The archæology of the Muhammedan *Khurauj*, or Land-Tax, is by no means so abstruse or uninviting as to repel an inquirer of ordinary patience. It rests upon foundations which have nothing of the questionableness or mythical speculation of the Hindoo law. We may here restrict ourselves to observing that there is ample evidence in favour of the conclusion that, in its origin, and in the theory of its incidence, for centuries upon centuries, the Land Revenue of India was a Rent and not a tax. We shall have to recur to this hereafter.

But it was a Rent in a form all modern political economy has declared to be the worst in which it can be assessed. It was a given portion of the gross produce; such as the greed of the rulers, or the abject state of the ruled, was fain or forced to let grow into the lion's share. Theoretically, even at its origin, it was a species of Rent; but there ensued, too often, a surplus exaction, which was a Tax. This has, however, been changed; and, in recent times, years in British India may be counted as centuries, if we consider the great revolutions they have made in the laws, customs, traditions, and prejudices of races erroneously supposed to be imbued with an

inflexible immutability. In nothing has this been more obvious, than in the large reforms of the principles of Land Revenue collection. And, if the British sway in India had not nobler records, it might well be proud that in this most important matter it has swept away the inherited injustice of former ages.

Living, present history will prove this. We may with advantage be instructed respecting it by a passage to be found in the last of the remarkable series of state papers recently issued by the East India Company. The Land Revenue system, in its latest form of improvement, is there criticized in words proclaiming that no oppression on the Landholder can have substantial existence any longer—words which, if inserted in a general code of administration, might be deserving of the designation of the Indian Magna Charta. The “Memorandum of Improvements in the Administration of India, Feb. 1858”—the paper here referred to—seems founded in chief measure upon an application, to the peculiar circumstances of India, of the rationale common to all state Land Revenues, or so called Land-Taxes, which have originated in the form of reserved rents. The characteristics of the different Tenures of Land in the several Presidencies are described at some length in the Memorandum, and in continuation of what had been previously officially stated in the special Return of June 1857 (Parl. Paper 112, Sess. 2). Statistically an exception must be taken to the estimate of the proportion of Revenue derived from the Land, as being Two-Thirds. It would be more correct to say (as already shown) that the proportion is above One-Half, or about 55½ Per Cent.

The part of the Memorandum it is now proposed to quote in full, runs thus (see pages 7-8):—

“Nearly two-thirds of the revenue of India consist of the rent of land. So far as this resource extends in any country, the public necessities of the country may be said to be provided for, at no expense to the people at large. Where the original right of the state to the land of the country has been reserved, and its natural, but no more than its natural, rents made available to meet the public expenditure, the people may be said to be so far untaxed; because the Government only takes from them as a tax what they would otherwise have paid as a rent to a private landlord. This proposition undoubtedly requires modification in the case of a Ryot or peasant cultivating his own land; but even in his case, if the Government demand does not exceed the amount which the land could pay as rent if let to a solvent tenant (that is, the price of its peculiar advantages of fertility or situation), the Government only reserves to itself, instead of conceding to the cultivator, the profit of a kind of natural monopoly, leaving to him the same reward of his labour and capital which is obtained by the remainder of the industrious population. Any amount whatever of revenue, therefore, derived from the rent of land, cannot be regarded, generally speaking, as a burthen on the tax-paying community. But to this it is of course essential that the demand of revenue should be kept within the limits of a fair rent. Under the Native Governments, and in the earlier periods of our own, this limit was often exceeded. But under the British rule, in every instance in which the fact of

excessive assessment was proved by large outstanding balances and increased difficulty of realization, the Government has, when the fact was ascertained, taken measures for reducing the assessment.

"The history of our government in India, has been a continued series of reductions of taxation; and in all the improved systems of revenue administration, of which an account has been given in the preceding part of this paper, the object has been not merely to keep the Government demand within the limits of a fair rent, but to leave a large portion of the rent to the proprietors. In the settlement of the North-West Provinces, the demand was limited to two-thirds of the amount which it appeared, from the best attainable information, that the land could afford to pay as rent. The principle which has been laid down for the next settlement, and acted on whenever resettlement has commenced, is still more liberal: the Government demand is fixed at one-half, instead of two-thirds, of the average net produce; that is, of a fair rent. The same general standard has been adopted for guidance in the new assessment of the Madras territory. In Bombay no fixed proportion has been kept in view; but the object has been, that land should possess a saleable value. That this object has been attained throughout the surveyed districts of Bombay, there is full evidence; and as the Ryots have been secured from increase of revenue for the space of 30 years, the value of land may be expected, from the progress of improvement, to be constantly on the increase.

"It has been shown above, that by far the largest item in the public revenue of India is obtained virtually without taxation, because obtained by the mere interception of a payment, which, if not made to the State for public uses, would generally be made to individuals for their private use."

The preceding extract does not make any specific mention of Bengal, or of the Punjab, but it is meant to include these Governments in the general scope of the conclusions it so tersely and justly expresses. It will be well, however, to complete our view of the whole of the Indian Revenue, by briefly observing that in Bengal,—where Lord Cornwallis's Permanent Settlement of 1793, subsequently resurveyed, chiefly prevails—the Land-Tax does not average more than half of a fair net Rental; and that it is stated upon the most reliable official authority respecting the Punjab—where the Village system of settlement mostly prevails—that from searching and accurate inquiry in the Settlement Department, showing the exact yield and value per acre of every kind of Crop, it has been ascertained that the Government demand does not there exceed one-fifth of the gross value of the produce in rich tracts, and one-sixth, or one-eighth, or even less, in poor tracts of country.

In fact, intentional oppression on the Indian Landholder or cultivator, on the Zumeendar or Ryot, may be put aside as byegone, and as purely a tradition of the past. The British system of administration has treated the improving landholders of India, both great and small, with careful consideration; and has exempted them from increased assessments on account of improvements, to an extent not known to legislation on Land-Tax in Europe, if indeed we except the permissive powers of Redemption given in England by Mr. Pitt's Act of 1798.

It may, perhaps, be recollected that in the paper on British Land-Tax Statistics, read to the Statistical Society in May 1857, (see Vol. xx of *Journal*), I explained at some length the various logomachies the Land-Tax had given rise to in England from the time of Charles the First, and even before, down to the present period. It is not to be expected that Indian Land-Tax—obviously more complicated—should have been free from the same kind of result. We need not be surprised at the formidable array of volumes of controversial literature it has produced.

If the word Tax, in the ordinary sense of the term, was open to misconstruction as applied to national land revenue in Great Britain—where this impost was a given portion of net reserved rent belonging to the state, and inherited from feudal times—how much more was it so, where applied, as in India, to the integral Rent itself. If England chafed at the burden of a Land-Tax when it was, at the maximum, One-Fifth of the Net Rent, how could India bear a Tax on the Land, equal to the whole Net Rent, or to more than the whole Net Rent? The answer is, that reduced to its true definition, Land-Tax does not exist in India. The Rent of the Land is paid to the British Government in India as the sovereign landlord, and by the same right of the strong arm and of the bold will as is recognized in the Hindoo laws of Menu, or in those Chapters of the Koran which are the foundation of the Mahometan laws. Even if this were disputed, it cannot be denied that the British Government has, *de facto*, proprietary rights; but not possessory rights, except for resumed, escheated, or waste, lands. It enjoys the Rent-Roll of the country, but not the power of dispossession of the tenant. And tenants, hereditary but not necessarily resident, form the great mass of the people, whether their tenure be that of members of village communities; cultivators by themselves or deputies; or in any other way. It is only the minority of the people who are Freeholders by inheritance, custom, gift, or purchase.

Dismal relations are sometimes heard of the cruelty of the British Government in India, resuming lands from the ryot when he is unable to pay his Rent or Land Tax. But let us ask if Resumption has not been the practice from time immemorial in India, and if it be not the condition prevalent in almost every European country in which, by the absence of laws or customs of primogeniture, or by the existence of a fancy for cultivating little patches of ground, the Land is cut up into small freeholds? This Society will remember, that in the paper from Lord Lovelace read to them some years ago, this was distinctly pointed out as being the case in France, where frequent resumptions and sales of plots of ground take place to discharge arrears of Land Tax; and even in England timber has, before now, been felled to provide for the arrears of that tax, insignificant, we

may add, as is its amount, viz.: under One-Hundredth part of the Rental from Real Property.

Having entered into these explanations, we are now in a position to return to the two examples with which we commenced the present paper, of the calculations of incidence of Taxation in India, as set forth in Parl. Paper, 86/'58. Having described the reasons for which it would seem that the Item of Land-Tax must be wholly expunged, if we desire a view of the pressure of Taxation, as distinguished from the Revenue raised per head, we shall find on doing so, that the pressure of Taxation upon each inhabitant, as estimated for 1854-5, was 7½*d.*, in the North West Provinces, instead of 8*s.* 3½*d.*, which are the figures of the Parliamentary Return; and 1*s.* 4*d.* in Bombay Presidency, instead of 8*s.* 9½*d.*, in the same return. The further addition which ought to be made for Salt Tax will presently be alluded to.

The corrections thus far have been arrived at by deduction from the figures for the North West Provinces, of the Land Tax for the Financial Year 1854-5 (given in Parl. Paper 16/'57). In those for Bombay, the Parl. Paper 86/'58, on which the estimate is based, besides being obviously wrong in Col. 6 of the Table, disagrees in its figures of Col. 4, with those in Parl. Paper 16/'57, above referred to; and in order to make the amended estimate for Bombay, it has been deemed preferable to take the Sayer, Miscellaneous, Stamps, and Customs Revenues from the latter paper.

But in both instances Salt Duties have been omitted. There is, however, no item of Taxation which so really falls on every individual in India as this one. For salt, then, we must add 3½*d.* per head to the *Taxation of the North-West Provinces, which may thus be estimated at a total of 11½*d.* per head in 1854-5; and in Bombay 5½*d.* per head for the same Item, must be added, making the total taxation there equal to 1*s.* 9½*d.* per head.*

Our total estimate of the Pressure of Taxation in 1854-5, is therefore different from the Return made to Parliament in February, 1858, by 2*s.* 4½*d.* per head, or nearly 72 per cent. less than that Return, for the North West Provinces; and by 2*s.* per head, or nearly 52 per cent. less, for Bombay Presidency.

The comparison between the pressure of Taxation in India, and in the United Kingdom, may with advantage be made in a more general manner. It is in many respects useful to have a clear, approximate view of it. Before commencing such an estimate, it will be desirable to see what is the proportionate density of the population in the two countries.

The following TABLE C affords a convenient and condensed Summary of the Area and Population of British India, and of the Native States immediately connected with the several Presidencies,

according to the latest approximate or officially obtained censuses, published by the East India Company.

TABLE C.

SUMMARY of the AREA and POPULATION of INDIA. *Constructed from the "Return of the Area and Population of each Division of each Presidency of India, from the latest inquiries; comprising, also, the Area and estimated Population of Native States. Ordered by the House of Commons to be printed 28th July, 1857."*

1	2	3	4	5
States.	Government.	Countries.	Total AREA, in Thousands of Square Miles.	Total POPULATION, in Millions.
British	Governor-General of India in Council....	{ Punjab, Oude, Berar, Pegu, Tenasserim, Eastern Straits Settlements	246.	23.
	Lieut.-Governor of Bengal	{ Upper and Lower Provinces, Assam, Cachar, So.-West Frontier, Arracan	222.	41.
	Lieut.-Governor of No.-Western Provinces	{ Delhi, Meerut, Agra, Benares, &c., Non-Regulation Provinces, Saugor, Nerbudda, &c. ..	106.	34.
	Governor of Madras	{ Madras Districts, Ganjam, Vizagapatam, Coorg	132.	22.
	Governor of Bombay	{ Bombay District, Satara, Sinde	131.	12.
	Total, BRITISH STATES*		837.	132.
Native	Bengal	{ The Deccan, Nepaul, Rajpoot States, &c.....	515.	39.
	Madras	Mysore, Travancore, &c.	52.	5.
	Bombay	{ Guzerat and Kattywar, Petty States, &c.....	61.	4.
	Total, NATIVE STATES		628.	48.
Total, BRITISH AND NATIVE STATES			1,465.	180.

* A correspondent of one of the London papers, "The Daily News," March and April, 1858, in writing on the organization of our Indian armies, has given some statistics based upon the late redistribution of Indian provinces by Lord Canning, and upon the East India House Tables, of which the above TABLE C is an abstract. They do not differ from the latter materially, and the object in now

The territorial limits of the Political administrations do not quite correspond with those of the Revenue Collectorates, parts of some of the Presidencies being under the financial rule, or at any rate included in the Revenue Accounts, of the Governments of other Presidencies. This is of sufficient moment to require the construction of a detailed analysis according to Collectorates, which may also be useful in further statistical enquiries. The results are for convenience transferred to the Appendix (see TABLES N to R, and SUMMARY S, post).

The average population of the British Indian States, as deduced from the figures of which the preceding TABLE C is a summary, may

quoting them is the interesting comparison with the size and populousness of several of the great countries of Europe. The writer uses the initials J. B., and we may, with but little risk of error, guess that they belong to a distinguished general officer who is a member of this Society, and has written a great deal on Indian subjects. The following are the figures, corrected by those given in the work, "India and Europe compared," by Lieut.-General John Briggs. London, 1857, 12 mo. :—

Comparative AREA AND POPULATION of the Principal Kingdoms of Europe and Her Majesty's Dominions in INDIA.

EUROPE.		Area, Sq. Mls.	Population.
Austrian Empire	256,784	.....	35,750,621
Kingdom of Bavaria	29,327	.....	4,559,452
		286,111	40,300,075
Empire of France		201,961	35,783,170
Kingdom of Spain	144,698	.....	14,216,219
Italian States	58,185	.....	10,832,881
		202,883	25,049,100
Kingdom of Prussia	107,686	.....	16,331,187
„ of Holland	13,571	.....	3,397,851
„ of Saxony	5,759	.....	1,511,272
		127,016	21,240,310
„ Naples and Sicily....		42,132	7,975,850
„ Wurtemberg		7,503	1,733,263
		867,606	132,081,768
INDIA.			
Bengal Presidency		222,609	41,961,513
Punjaub	112,671	.....	24,652,663
Bombay and Scinde	131,564	.....	11,790,042
		244,215	36,442,705
North-West Provinces		74,686	23,337,033
Madras Presidency		132,090	22,437,247
Mysore.....	30,886	.....	3,460,696
Nagpore	76,432	.....	4,650,000
		107,318	8,116,696
European settlements		62,993	887,151
		943,911	133,176,345

be nearly estimated as follows, ranging the countries in their order of populousness:—

Countries under the Administration of—	Density of Population Per Square Mile.	Proportion Per Cent. of Total Population.
Lieut.-Governor of North-West Provinces	318.	26.
Lieut.-Governor of Bengal.....	184.	31.
Governor of Madras	170.	17.
Gov.-General of India in Council (Punjab, &c.)	95.	18.
Governor of Bombay	89.	8.
Average of British India.....	157.	100.

The average population of the Indian Empire is 157 per Square Mile, as against 332 per Square Mile for England in 1851. It is, therefore, in the aggregate, not one half as dense. If we are to define it by the nearest English standard, it may be said to be intermediate between the population of the counties of Northumberland and Rutland (154 per Sq. Mile), and of the counties of Salop and Huntingdon (178 per Sq. Mile). But it is denser by 70 per cent. than the population of Scotland (92 per Sq. Mile), and by 16 per cent. than that of Wales (135 per Sq. Mile).

Then again, looking at the separate Presidencies in the order of density, we find that the North West Provinces are thickly peopled, 318 per Sq. Mile, against 332 for the whole of England. Or, defining by the nearest parallelism with English Counties, the ratio is intermediate between Derbyshire (288 per Sq. Mile) and Nottinghamshire (329 per Sq. Mile).

The population of the Bengal Presidency (184 per Sq. Mile) may be compared, in territorial closeness, with that of the East Riding of York (182 per Sq. Mile), and of Dorset (186 per Sq. Mile).

The population of Madras Presidency (170 per Sq. Mile) ranges between that of Northumberland and Rutland (154 per Sq. Mile), and of Shropshire and Huntingdonshire (178 per Sq. Mile).

The density of population in the Countries under the Governor-General, 95 per Sq. Mile, is to be classed intermediately between that of Westmoreland (77 to the Sq. Mile), and that of the North Riding of Yorkshire (102 to the Sq. Mile).

The most thinly peopled of the Presidencies, Bombay, 89 per Sq. Mile, may also be classed between the English County of Westmoreland and the North Riding of York, just referred to.

For the reasons already mentioned as to the differences between the territorial limits of the Political administrations and of the

Land Revenue Collectorates, the analysis of the incidence of Taxation per head of the population, may be preferably restricted to a general calculation for the whole of India. As, however, it is useful to show in what parts of India the Items are raised, the following TABLE D is also arranged for each Presidency:—

TABLE D.
INDIRECT and DIRECT TAXATION of INDIA in the Year 1855-56.

1	2	3	4	5	6	7
Items of Revenue.	Presidency or Government.					Whole of India.
	Bengal.	No.-Wstn. Provinces.	Madras.	Bombay.	Punjab.	
(I.) <i>Indirect Taxation.</i>	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £
Salt	1·082	·549	·541	·275	·204	2·651
Customs.....	1·541	·078	·140	·348	....	2·107
Excise	·045	....	....	....	....	·045
tamps	·224	·169	·071	·069	·020	·553
	2·892	·796	·752	·692	·224	5·356
Proportion per Cent. of Indian Total Indirect Taxation	54·	15·	14·	13·	4·	100·
(II.) <i>Mixed, Direct, and Indirect Taxation.</i>						
Sayer and Abkarry (Sundry Taxes, Spirit Licenses, &c.).....	·499	·303	·247	·116	·079	1·244
Moturpha (Income Tax on Artisans, Shopkeepers, Tools, &c.) ..	....	....	·109	....	....	·109
	·499	·303	·356	·116	·079	1·353
Proportion per Cent.	37·	23·	26·	8·	6·	100·
TOTAL of (I.) and (II.) Indirect and Direct.....	3·391	1·099	1·108	·808	·303	6·709
Proportions per Cent. of (I.) and (II.) for India	51·	16·	17·	12·	4·	100·

It will be observed that this TABLE D does not include all Items of Indian Revenue. A complete Return of every Item for the Year 1855-56, being the last for which any definitive results are yet published, has been given in the first TABLE A of the present paper. Here it will suffice to briefly allude to the reasons for the several

omissions, which are requisite in arriving at a just view of Taxation, as distinguished from gross Revenue Statistics.

The Land Revenue has already been referred to as really rent, and *not* a Tax. The next Item left out is Post Office Revenue. This is no Tax, for the rates of Postage are so moderate that they cannot be termed even a remuneration for the services performed by the Government administration of Letter-carriage. The Mint dues, which are trifling in amount, are also omitted; and similarly with the Miscellaneous Revenue, not included with what is termed the Sayer Revenue (which latter is brought into our calculation). The Revenue technically termed Miscellaneous cannot be taken as a tax upon the body of the people, for the greater part of it is derived from Subsidies of Native Princes, Marine and Pilotage Receipts, Judicial Receipts, Interest on Debts due, and some small Toll and Ferry Collections. The other Item omitted is Opium Duty. I have left this large Item to be explained last, as I am not aware of any grounds on which it can be classed among the Taxes of India. It is wholly borne by the foreign consumer, and the cultivation of Opium of course helps the payment of all Taxes, by the large employment it gives to native labour and capital.

Resuming our calculation to be based on TABLES A and B, it will be observed that there is a total Taxation of 6,709,000*l.*, to be distributed amongst 132 Millions of People. Part of this Taxation, the *Moturpha*, or Income-Tax on Artisans, Shopkeepers, and Stock-in-Trade, has, it is understood, subsequently to 1856, been discontinued. We may, therefore, without chance of grave error, take in round numbers 6,600,000*l.*, as the real Taxation borne by 132 Millions of Indians subject to the British Rule.

The Average TAXATION per Head for INDIA is therefore ONE SHILLING.

And for comparison with the United Kingdom, take the Revenue for the Year ended 31st March, 1858 (a convenient period as it is the latest, and free from the War Ninepence of additional Income Tax), and we find a total of about 68 Millions. From this amount, and upon the same principles as have been referred to in respect of Indian Fiscal Revenue, deduct 3 Millions on account of Land Tax and Post-Office Revenues (say 1 Million for the former and 2 Millions for the latter), and we have 65 Millions left as the Gross Public Taxation, to meet an equivalent amount of the charge of the Consolidated Fund. But we may augment this by at least 10 Millions for Local Taxation, including Poor Rates, so that, altogether, there are, at the most moderate calculation, 75 Millions Sterling of positive Taxation to be spread over a population of under 30 Millions of Souls; and of this Taxation, about 64 per cent., or in round terms, a little under two-thirds, are raised by Indirect Taxation; and the

remaining 86 per cent., or something over One-third, by Direct Taxation.

The conclusion is, that for GREAT BRITAIN and IRELAND, we have, in sufficiently near approximate figures, an average TAXATION *per head* of at least FIFTY SHILLINGS, against One Shilling *per head* for India.

There exists, consequently, a Ratio of 50 to 1, if the incidence of taxation proportionately to population be contrasted in the United Kingdom, and in India.

Something like an approach to correctness of judgment upon this point is certainly to be desired. Various public and parliamentary statements, based on such statistical forms as those considered in some detail on this occasion, would indicate an apparent Ratio of only about 9 or 10 to 1.

These differences are not light subjects of inquiry, in which it makes little difference how the balance weighs. It is not "all the same" to One Hundred and Eighty Millions of people, whose condition is affected by the opinions and acts of Thirty Millions of other people.

The analysis in the following TABLE E will show approximately the distribution of the Taxation of One Shilling *per head*, and the variations in the several parts of India.

Reviewing some of the data in the following TABLE E, it may now be observed, that, taking the Taxation for the whole of British India at 1*s.* *per head* as the general average rate, the rate *per head* for Madras is the same; the rate for Bengal and Bombay exceeds it by one-third, being 1*s.* 4*d.* *per head*; the rate for the Punjab is one-fourth below it, being 9*d.* *per head*; and, lastly, that the rate for the North-West Provinces is lowest of all, being 7*d.* *per head*, or 60 Per Cent. below the general average.

Revenue from all sources—whether of Taxation or not—being similarly compared with the population, it will be seen that the general average for British India being 4*s.* 8*d.* *per head*, the rate for Madras is again in close conformity with it, viz.: 4*s.* 7*d.*; that for Bombay the rate is as much as 77 per cent. in excess, being 8*s.* 3*d.* *per head*; for Bengal only about 7 per cent. in excess, viz., 5*s.* *per head*; and that in the North-West Provinces and Punjab the rates, viz., 8*s.* 5*d.* and 3*s.* 3*d.*, are about one-third below the general average.

It is conducive to further information, if the proportions between the amount of Revenue from all sources, and that raised from the particular items only which press upon the people as Taxation, be ascertained. And upon the evidence of the preceding table, assuming also that the conclusions on which it is based are here admitted, it may be estimated that in the whole of British India *not much*

beyond One-Fifth of the Revenue is raised by Taxation, or say, more nearly 21 Per Cent. In Bengal 27 per cent. of the revenue is thus raised, being upwards of one-fourth in excess of the general average. In the Punjab 23 per Cent., or about one-tenth in excess. In the

TABLE E.

TAXATION and TOTAL REVENUE.—PER CENTAGES for each PRESIDENCY; and AVERAGE INCIDENCE PER HEAD upon the Total Populations in the Year 1855-56.

	1	2	3	4	5	6	7
Description of the Several Calculations.	Presidency or Government.					Whole of British India.	
	Bengal.	No.-Wetn. Provinces.	Madras.	Bombay.	Panjab.		
	Mins.	Mins.	Mins.	Mins.	Mins.	Mins.	Mins.
1. Population of the Collectorates included in the Revenue Accounts (see TABLES of Appendix and SUMMARIES)	52°	37°	23°	12°	8°		132°
2. <i>Per-Centage of ditto to Total Indian Population</i>	39°	28°	18°	9°	6°		100°
3. Taxation, as per TABLE D, ante, in Millions Sterling, and made up of Salt Tax, Customs, Excise, Stamps, Sayer, Abkarry, and Moturpha	£ 3·391	£ 1·099	£ 1·108	£ ·808	£ ·303		£ 6·709
4. <i>Per-Centage of ditto to Total Indian Taxation</i>	51°	16°	17°	12°	4°		100°
5. Taxation per Head, in Shillings and Pence, disregarding Fractions	s. d. 1 4	s. d. — 7	s. d. 1 —	s. d. 1 4	s. d. — 9	s. d. 1 —	
Supplementary Notes. Showing the proportion raised in each Presidency, of the total Revenue from other branches not included in the definition of Taxation.							
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
6. Land Revenue (for amounts, see TABLE A)	27°	29°	21°	17°	6°		100°
7. Opium ditto ditto	80°	....	....	20°	....		100°
8. Post Office ditto ditto	19°	37°	25°	9°	10°		100°
9. Mint Duties ditto	61°	....	10°	29°	....		100°
10. Miscellaneous ditto	46°	5°	34°	14°	1°		100°
	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	
11. Total Revenue from all sources of income and taxation	13·019	6·260	5·287	4·953	1·298		30·817
12. Ditto, ditto, per Cent. for each presidency	42°	20°	18°	16°	4°		100°
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
13. Ditto, ditto, PER HEAD, in Shillings and Pence, disregarding Fractions..	5 —	3 5	4 7	8 3	3 3		4 8

North-West Provinces the ratio falls to 17 per cent., or about one-fifth below it. And in Bombay, where, as before observed, the aggregate revenue per head is the highest, the proportion raised from taxation is the lowest, viz., 16 per cent., being one-fourth below the general average.

The figures in TABLE E might also serve to illustrate other matters; but on the present occasion it is not desirable to enter on inductions requiring reference to those various methods of land settlement that are prevalent in the several presidencies, and the effects of which are involved in some of the reasons for the differences above pointed out. We have, therefore, restricted the statement to statistical results, and may now conveniently pass to the next branch of inquiry.

II.—*Productive, financial and industrial condition of the country and people of India. Degree in which experience and facts have already shown it to be susceptible of improvement through the promotion of agriculture and public works, better means of irrigation and transit by canals and railways, and an amended system of Land Settlement.*

Unquestionable as are the resources of India for the production, on the grandest scale, of articles necessary and useful in the food and clothing of mankind—important as their development undeniably is to the wealth and position of this country—it is but recently that public attention has been much directed to the promotion of an improvement in this respect. And, indeed, it is scarcely to be wondered at that it was postponed in periods of transition, like those during which the extension and consolidation of the British empire in India absorbed its surplus revenue in the process of military annexation, occupation, and defence.

The time has, however, arrived when there is a very general hope that a real impetus may be given to the concentration of the energies of its vast, and, generally speaking, docile, population, on an effectual pursuit of the arts of peace. Amongst the results to be looked for, are, a more thorough utilization than hitherto of means and opportunities connected with cultivation, trade, and industry—a better supply of raw produce to our markets at home—an increased importation of British manufactured goods—an avoidance of the extreme evils from the periodical scarcities of food which are apt to decimate portions of the Indian population—and, finally, an improvement of its moral and spiritual condition through a gradual elevation of its physical and material status.

A preservation of the dead level of the existing state of things is most earnestly to be deprecated. Exhaustion of resources in an unproductive manner has been for ages upon ages the bane of India. It is within the power of British administration to show that this

can be reversed : and that a country which, with all the material of wealth, is eminently poor, can be made rich in every sense of the word.

The problem is not simply the raising of a larger revenue. This was solved by the old Mahomedan sovereigns, who found ways of levying a larger amount than the present revenues of India, upon a smaller territory ; from probably a less population ; and certainly with commercial and fiscal circumstances inferior to those which now exist. But the real problem is, to do away with the exhaustive social condition of the people of India. To accomplish this, the illusion of the balance of trade theory must be entirely swept away. It is not a question of the precious metals. For thousands of years India has absorbed silver and gold to an extent which has alarmed that section of ancient and modern bullionists, to whom these two metals are exclusive incarnations, as it were, of wealth.

In a country like India, where—under the old regime—oppression, wasted energy, unproductive expenditure, deadening influence of caste, early marriages and polygamy, have prevailed, a golden stream, even though it rivalled that of Pactolus, might have flowed in vain. We must never lose sight of the fact, that “ kings barbaric,” notwithstanding the “ pearl and gold,” were the ruin of India. The high-caste Babú, lolling in his carriage in the streets of Calcutta, is said often to sigh for the days of the Delbi Moguls—the glitter and show of their courts and camps, and the elegant and costly monuments they reared. But is the reverse of the picture considered ? a reverse, with few exceptions, painted in the darkest colours even by historians whose bias was in favour of a system which the facts they recite utterly condemn. Roads were, it is true, constructed, but in wholly insufficient quantity ; great arteries of communication were opened up, but the veins and feeders of them were neglected. The direction of the roads also was dictated rather by convenience of strategic purpose, or the personal comfort of the sovereign, than by the view of development of the resources and well-being of the people. Stately buildings were erected for palaces, halting places and tombs ; works intended to exalt the name, and perpetuate the personal vanity of sovereigns who generally left unfinished what had been begun before them, in order to embark in fresh and more wasteful undertakings, doomed in turn to be neglected by their successors.

It is not to be supposed that, in the long period of seven centuries of Mahomedan government, rulers exceptionally superior should not have appeared ; but the instances are few, and the foundations of a wise and settled financial policy were never laid. The skill and wisdom of an administrator like Akbar, supported as it was by the great Finance ministers who settled his revenue scheme, failed to

subvert the system of oriental statecraft which had its roots in fear, and not in mutual support, and possessed qualities which might make it flourish for a time, but left the elements of stability and of progressive prosperity wanting.

Some canals, and other productive public works, were certainly constructed; but the revenue was chiefly spent in devastating and impoverishing war, and in the unbridled indulgence of the sovereign, his favourites, and his Tax gatherers. In expenditure, wasteful as it usually was, a good effect was nevertheless apparent on the surface. It employed labour. It increased the circulation of money. The public treasury always derived a passing benefit from such circumstances. The period was one of "full currency," in which the channels of taxation were easier filled. But the effect was transient; the reaction—of diminished employment of labour—of want of adequate return from the objects on which the capital was expended—of restricted circulation of money—soon set in; and then tyranny and exaction were always ready to fill the void and force the supplies.*

Mr. Arthur Mills, M.P., in his recent work "India in 1858," † has given some approximate figures of the items of Expenditure of the Government of India, which it will be well to refer to here, as neither the limits nor the objects of this paper will admit of more than a passing note of the general statistics of expenditure. The figures are given by Mr. Mills, in the following round numbers, and I have here annexed the per centages borne by each item to the total. The estimate is made on an average of four years preceding the Mutiny of 1857–8.

	£	Per Cent. of Total Expenses,
Charges incident to the collection of the Revenue	6,000,000	20°
Military and Naval Charges	11,000,000	37°
Civil, Judicial, and Police	5,000,000	17°
Public Works.....	1,500,000	5°
Interest on Bond Debt in India	2,000,000	7°
Charges defrayed in England (including interest on home bond debt, dividends to proprietors of East India Stock, amounting in the last esti- mated return to 627,893 <i>l.</i>); Payments on account of Her Majesty's Troops, and establishment charges at the East India House and Board of Control	3,500,000	11°
Allowances and assignments to Native Princes, under treaties and other engagements	1,000,000	3°
Total, about.....	30,000,000	100°

* "Faites passer beaucoup d'argent par les mains du peuple, il en refuse néces-
sairement, dans le trésor, une quantité proportionnée que personne ne regrette. Le
peuple a-t-il peu d'argent, il en rendra peu, et il faudra le lui arracher."—
Forbonnais.

† London, Murray, 1858. See p. 133 of second edition.

The only item which need be now referred to, is that of Public Works, which, it will be observed, is only 5 per cent. of the total expenditure, although as Landlords, or at least as chief receivers of Rent, the government are mainly interested in that branch of expenditure.

In the paper read to this Society in January last, by our Vice-President, Colonel Sykes, M.P., on "Public Works in India," the nature and extent of the improvements in late years of the British administration of public works in India, is elaborately described. Besides the many valuable Indian Statistics for which this Society and its Transactions have been indebted, on that and on many previous occasions, to the experience and industry of Colonel Sykes, reference may also be made on the general subject of the recent policy of the East India Company, in respect of public works (such as the Ganges Canal, the Telegraph, Railways, &c.), to Lord Dalhousie's well-known Memorandum, and to the documents which have emanated from the East India House, and do great credit to its Statistical Department.

The expenditure on public works in India may have been shown to be judicious; its results in the profitable return of interest, directly or indirectly, on the capital expended, have proved satisfactory, and in some instances, surprisingly so. It may be evidenced that more has been effected for the good of the people of India than the Mahomedan system of expenditure could accomplish; but we must not conceal from ourselves the fact, that in number, extent, and outlay, the experimental public works, already undertaken and finished, have fallen short of what is desirable, and in some respects necessary, when we consider the extent of area and population whose material progress is concerned.

The great machinery of credit, capital, and industry, according to the methods and views adopted in the United Kingdom and in the United States, must be brought to bear with far greater rapidity, and in much more extensive and connected a manner than hitherto, if the British possession of India is to be made reciprocally advantageous to its people and ourselves.

A member of this Society, Dr. Hyde Clarke, has recently published a work on "Indian Colonization, Defence, and Railways,"* the 13th chapter of which treats on the operations of English Capital in India, particularly with reference to railways. The whole work, and especially the chapter referred to, is well worthy of attentive consideration. The author shows (1) that there is no question connected with labour and capital, and involved in the construction of railways and public works (either in this country or in America),

* London, Weale, 1857. See pp. 184 to 224. Consult also Lieut.-Colonel Kennedy's pamphlet on analogous subjects. London, Wilson, 1858.

which has not been satisfactorily answered by the teaching of results as beneficial as they are important; and (2) that similar results are equally to be looked for in India. "That no labourer need be imported there; no food, no clothing for the labourer need be imported; but what is required is to direct the labour of one hundred and fifty millions of people, whose time is now chiefly spent in inactivity, so as to construct the required railway, canal, irrigating and other public works;" for though, as Dr. Clarke proceeds to say, he has treated the subject in direct reference to railways, "it equally applies to all those public works advocated in preference to railways by their opponents, and it shows whence the means are forthcoming for endowing India with every requisite means of advancement, namely, by the rightful application of her own energies and resources, without putting a veto on any branch of enterprise."

Positive experience already gained respecting Canals and Irrigation, and the improvement of Rivers and Inland Navigation, has been very striking. In Colonel Sykes's "Notes on Public Works in India," this Society will recollect that it was observed that the amount of Interest shown by the net revenue from the Delhi and Western Jumna Canals, is 36 per cent. on the invested capital; that the Doab or Eastern Jumna Canal gives a net annual return on the capital laid out, of nearly 24 per cent.; that the return to be expected from the expenditure in progress of 1½ Million Sterling on the Ganges Canal, will be 28 per cent. The locality of these three undertakings is in the North-West Provinces.

The dry arithmetical statement of the per centage return on invested capital is, however, by no means the measure of all the good accomplished. The productiveness of the land, and the consequent increase of the Rent or Land Revenue of the Government, has uniformly augmented largely and immediately under the improvement of irrigation and transit, as affecting cultivation, water power, grazing, &c.; and lastly, though far from least noticeable, is the fact that the premature death of thousands of persons from famine has been averted, and wealth to the extent of Millions of Pounds Sterling has been preserved, as well as produced, through the self-same means.

Comparatively with area and population, the extension of these works has not been either so great or so continuous as might be desired. If we exclude those undertakings that are of a purely military character, and review the items which may be classed under Land and Water channels of communication and Irrigation Works, or in other words, the Revenue-productive Public Works, in recent years of most activity, it appears that an outlay of about One Million and a Half Sterling has been the maximum for one year. If we take the most immediately productive works, viz.: of Canalization and

Irrigation, it will be seen that not more than 788,015*l.* in the year 1853-54, and 543,333*l.* in the year 1854-55, was thus expended.*

The condition of the Revenue, as preventing a more rapid and extensive outlay, has hitherto been an answer to those who might have been disposed to urge that even these amounts are insignificant, when the British Indian territory of 837,000 Square Miles, and its 132,000,000 of souls are considered. This answer resolves itself purely into one of alleged financial difficulty. That this difficulty is only apparent, and might be remedied, is evident, not only from the practical testimony of the productive results of such expenditure in the instances before adverted to, but also from the history and policy of the other branches of the Colonial Empire of this country. And the history of the East India Company, or of the trading companies of other countries, has shown no exception to the general rule, that expenditure on carefully selected objects of enterprise may often appear lavish and profuse, when it is but sowing the field whose harvest is the proof of the wise economy of that expenditure.

In the matter of the provision of Funds for Railway construction in India, we have an example of the deepest moment in proving that even the condition of some deferment of any large return for money expended, is no effectual bar to the ways and means of enterprise. During the eight years since the system of Indian Railways was started, only between two and three hundred miles of line have been opened for traffic. So far as the cost is concerned, the figures given in TABLE VII of Colonel Sykes's paper are confined to the two sections of Calcutta to Raneegunge, on the East Indian line, 121 miles, at about 12,000*l.* per mile; and of Madras to Arat, on the Madras line, 65 miles, at about 5,050*l.* per mile. The cost of the completed portion of the Bombay and Baroda line is not yet known. Restricting our observation, therefore, to the first two examples that are known, the experimental results of an aggregate outlay of 1,780,000*l.* only, can yet be observed. Of this, the Sum of about 1,452,000*l.*, being the outlay from Calcutta to Raneegunge, is said to be earning 7 per cent.

The sum paid by Railway Companies into the Treasury of the East India Company in England and India, is about 14½ Millions Sterling, out of a total amount of nearly 23 Millions Sterling authorized to be raised as at the close of the year 1857.

If then, under the system of guarantee, the resources of credit have led to the utilization of so important an amount of capital in a

* These are the figures under the Classifications of *Revenue and Irrigation*,—(Canals, Tanks, Embankments, Drainage, &c.),—and of *Repairs* of the like items. Under the classification *Public*, Navigable Canals also occur, but the amount so included did not reach 8,000*l.* in the year 1853-54.—See Colonel Sykes's paper already referred to.

direction which, useful as it is, and highly to be applauded, is not so largely and so immediately profitable as some other descriptions of Public Works in India, there is no reason why the latter should not be promoted and increased at the same time and by the same methods.

The examples already quoted from the paper by Colonel Sykes, on "Public Works in India," indicate some of the Results from the Canal and Irrigation Works in the North-West Provinces. Results of an equally encouraging character are also given in the same paper, as having been experienced in the Madras Presidency. The detailed tables of the special and other original works of irrigation performed in that part of India, and showing the effects upon Revenue and Cultivation from 1836 to 1849, are confirmatory of the statistics and views respecting them published by Colonel Arthur Cotton, who has for many years upheld the promotion of a deeper sense than is commonly entertained, of the responsibilities inseparable from the British rule in India, and of the absolute necessity for a more ample development of the material and moral resources of the soil and people with which Providence has connected it.*

In the first part of the present paper it was endeavoured to be shown what part of the Revenue of India depends on Taxation pressing upon the people, and what part upon Rent, or upon the net produce of the cultivation of the soil. It will be recollected that grounds were adduced on which to estimate the Taxation at only 21 per cent. of the gross Revenue; and data were given for rating 55½ per cent. of the gross Revenue, as derived from reserved rent, or so termed Land Tax. These are proportions which, compared with those existing in other countries, justify a very hopeful view of the peculiar adaptability of the Revenue of India to profit promptly and decisively from an increased momentum being given to productive expenditure.

In many countries the temporary or permanent burden of a fresh Loan, whether for productive outlay or not, must be borne by the

* Colonel Arthur Cotton's book, "Public Works in India, their importance, with suggestions for their extension and improvement," was first written for private circulation in India. A second edition, considerably augmented, was published in London in 1854. During Colonel Arthur Cotton's stay in England, in 1856, he published a pamphlet entitled "Profits upon British Capital expended on Indian public works, as shown by the results of the Godavery Delta Works of Irrigation and Navigation." The statistics and general conclusions of this pamphlet deserve attention. As regards Railway Expenditure and the policy of Railway construction in India, I am certainly on the side of those who differ, to a certain extent, with Colonel Arthur Cotton, but need not assure him of the respect which I entertain for his judgment, experience, and largeness of view, upon all points that tend to advance the resources and condition of those parts of India where his labours have worked so much good.

imposition of Taxation. In India, unproductive expenditure only such as defensive or aggressive war, or administrative extravagance, would likewise have to be thus defrayed, and in no country would it be more difficult to augment taxation for such purposes. But how differently circumstanced the conditions are with respect to outlay for industrial purposes in India, as compared with other countries, is obvious from the single circumstance of 55½ per cent. of the gross Revenue, being as stated, Rent of Land, a proportion far larger than in other parts of the world, and an Item of Revenue which all experience has shown is more easily improvable than any other, by productive expenditure devoted to reclaiming and improving; to "making war" (as the American phrase has it) "upon the wilderness"; to rendering rivers navigable, and watercourses and wells useful in irrigation; to bringing out the latent capabilities of the country for the growth of cotton, sugar, rice, indigo, silk, fibres, &c.

The old-fashioned and true doctrine, that, in State finance, "*parcimonia*," was nationally a "*magnum vectigal*," was mistakenly exaggerated by the opponents of the funding system in England, such as Dr. Price and his followers, into a groundless fear that all borrowing and employment of the machinery of credit was opposed to that doctrine. They refused to look around and take a large and practical view of the even then accumulated experience of European countries, whose resources had been increased, in every respect, through judicious expenditure of means raised upon an anticipation of the productive and profitable results which those means themselves in due season created.

And so would it be in India, under European guidance and discreet management. A Public Works Loan in India, under such a local and home administration as would afford a guarantee for its employment to the best advantage, would meet with a ready, and (it may be termed) a national, response, from the Indian native capitalists who might, when the right moment arrives, be invited to subscribe for a given portion of the Loan. A body of small capitalists might also be encouraged, and every Stockholder amongst them would be a further guarantee for the peace and welfare of the Indian community at large.

In continuation of the Statistics of the subject before us, the annexed TABLE F contains a statement of the Indian Debt in the several Presidencies, and of the Home Debt, according to the latest returns obtainable. The Statement following it, viz., TABLE G, gives an analysis of the Indian Debt into its several categories of Loans, Deposits, &c.

TABLE F.

PUBLIC DEBTS of the PRESIDENCIES of INDIA and HOME DEBTS of the EAST INDIA COMPANY; as at 30th April, 1856.*

Amounts converted into Sterling Money at the rate of 1s. 10½d. per Company's Rupee.

1	2	3	4
	Amount of Debt.	Rate of Interest.	Annual Amount of Interest.
INDIAN DEBT.			
(I.) Bengal.			
LOANS.....	£	Per Cent.	£
Ditto	338,178	6	20,291
Ditto	3,744,141	5	187,207
Ditto	39,392,841	4	1,575,714
Ditto	530,730	3½	18,575
	44,005,890	Avg. 4.095	1,801,787
LOAN transferred from Fort Marlborough	715	10	71
Treasury Notes	917,133	6, 4, & 3½	37,097
Civil and Medical Funds	2,268,300	6, 5, & 4	135,789
Miscellaneous Deposits	106,166	3	3,185
	47,298,204	Avg. 4.182	1,977,929
(II.) North-Western Provinces, including the annexed Territory.			
Miscellaneous Deposits	18,750	4	750
Temporary LOANS	219,656	5	10,982
	238,406	Avg. 4.921	11,732
(III.) Madras.			
LOANS.....	14,437	8	1,155
DITTO	7,547	6	453
Civil, Military, and Medical Funds	839,330	6 & 5	46,981
Miscellaneous Deposits	77,755	6, 5, 4, 3½ & 3	2,779
Treasury Notes	49,172	4 & 3½	1,960
Fund for Redemption of Bonds issued to Creditors of the late Rajah of Tanjore}	395,423	4	15,817
	1,383,664	Avg. 5	69,145
(IV.) Bombay.			
Civil Annuity and other Funds	568,019	6	34,081
Civil Provident and Military Funds	881,287	5	44,064
Miscellaneous Deposits	112,383	3 & 4	3,573
Treasury Notes	1,406	3½	53
	1,563,095	Avg. 5.231	81,771
(V.) Punjab.			
.....
TOTAL INDIAN DEBT	50,483,369	Avg. 4½	2,140,577

* The materials upon which this estimate is based are from the Official accounts (Parl. papers, 135 and 110, Session 2 of 1857). From the Lords' Returns to Lord Montague's motion of 18th Feb., 1858, it appears that no accounts for the year 1856-7 had been received at the East India House. As regards the Home Bond Debt, the Return (44) to the Earl of Ellenborough's motion of 15th March, 1858, confirms the figures as above.

TABLE F.—Continued.

1	2	3	4
	Amount of Debt.	Rate of Interest.	Annual Amount of Interest.
HOME DEBT.			
East India Stock, 6 Millions Sterling of 10½ per Cent. Stock, redeemable at 12 Millions.....	£ 12,000,000	Per Cent. (5½ on redemption price.)	£ 630,000
Home Bond Debt, charged upon the revenues of India by 3 & 4 Will. IV, c. 85 (20,917,171 of the Principal not bearing Interest)	3,915,317	4	155,776
TOTAL HOME DEBT	15,915,317	Avg. 4·908	785,756
TOTAL INDIAN AND HOME DEBT	66,398,686	Avg. 4·408	2,926,353

TABLE G.

ANALYSIS of the ITEMS constituting the PUBLIC DEBTS of the PRESIDENCIES of INDIA; as at 30th April, 1856, (exclusive of Railway Funds or Guarantees.)

1	2	3	4	5
Classification of Items.	Debt.		Interest.	
	Amount.	Proportion of Total Debt.	Amount of Annual Charge.	Rate of Interest.
	Mins. £	Per Cent.	Mins. £	Per Cent.
1. Loans	44·029	87·21	1·803	4·095
2. Temporary Loans	0·219	0·43	0·011	5·000
3. Treasury Notes	0·968	1·92	0·039	4·041
4. Redemption Fund of Bond Debt	0·395	0·78	0·016	4·000
5. Miscellaneous Deposits	0·315	0·63	0·010	3·263
6. Civil, Military, and Medical Provi- dent and Annuity Funds.....	4·557	9·03	0·261	5·725
Total, Indian Debt	50·483	100·00	2·140	4½
Proportions of the Debts of the several Presidencies.	Mins. £	Per Centage of Total.	Mins. £	Per Centage of Total.
I.—Bengal	47·298	93·69	1·978	92·44
II.—North-West Provinces.....	0·238	0·47	0·011	0·51
III.—Madras.....	1·384	2·74	0·069	3·22
IV.—Bombay	1·563	3·10	0·082	3·83
V.—Punjab .....	....	....	....	....
Total, Indian Debt	50·483	100·00	2·140	100·00

The preceding TABLE F shows, that the total annual charge for the year ended 30th April, 1856; or, in other words, the aggregate amount of annual interest, may be classed in the following three great divisions:—

	£
Interest on the Indian Debt	2,140,577
Dividends to Proprietors of Stock.....	630,000
Interest on the Home Bond Debt.....	155,776
Total	2,926,353

Sir George Cornewall Lewis in his speech (Committee of the House of Commons on the East India Loan Bill, 22nd February, 1858), in referring to the state of the total annual charge, according to the last accounts presented to Parliament, at the date to which the above figures apply, gave the amounts as follows:—

	£
Interest on the Indian Debt	2,044,318
Dividends to Proprietors of Stock	632,089
Interest on the Home Bond Debt	152,017
Total	2,828,424

But these are the figures of the interest paid in the year ended 30th April, 1856, and seem to have been quoted by mistake, for the figures of the annual charge imposed by the debt, which, as first above given, are 97,929*l.* per annum more than those in the ex-Chancellor of the Exchequer's statement.

It has already been repeated that no detailed accounts of the Revenue and Debt, yet published, extend beyond the date of 30th April, 1856. So far, however, as the principal of the Indian Public Debt is concerned, we are enabled, upon the authority of a Parliamentary Return published at the close of the present month (April 1858), to bring down some of Sir G. C. Lewis's figures to a later date, and these will be referred to hereafter.

The Right Hon. Gentleman stated the principal sum of the several branches of debt to be as follows:—

“That stock (of the East India Company) amounts to 6,000,000*l.*, and is guaranteed at 12,000,000*l.*,—that is to say, 200*l.* are to be paid for every 100*l.*,—so that the whole sum may be considered as equivalent to a debt of 12,000,000*l.* Now, the guarantee fund which is to be set off against that debt amounts to about 4,500,000*l.*, and we reckon that it will, in the course of a few years, be as high as 7,000,000*l.* Well, the India debt—in respect of all the three Presidencies—is 50,483,000*l.*, and the Bond Debt about 6,000,000*l.*; those various sums, in conjunction, constituting a total charge of 68,000,000*l.* That is the whole of the present charge upon the revenues of India, and against that is to be set off the guarantee fund. The Committee will therefore see that, comparing the gross debt of India with its annual revenue—which is 29,000,000*l.*—the amount is not so considerable as might have been supposed.”

It will be observed that Sir G. C. Lewis gives the amount of the Home Bond Debt at about 6,000,000*l.*, whilst the corresponding figures in TABLE F are 3,916,317*l.* The latter figures agree with those in the Return to the Order of the House of Lords, dated 15th March, 1858. It will not, therefore, be technically correct to assume the Bond Debt at 6,000,000*l.* It is true it appears in the Return just mentioned, that in addition to the Bond Debt of 3,915,317*l.*, there was, on the 31st January, 1858, a Debt of the East India Company, for "Money borrowed on security of East India Bonds," amounting to 1,970,000*l.* And the two sums together, viz., 3,915,317*l.*, and 1,970,000*l.*, make up 5,885,317*l.*, which may fairly be presumed as the items constituting the amount of about 6,000,000*l.* alluded to by Sir G. C. Lewis.

The Bonds of the Home Debt are issued at 4 Per Cent., and redeemable upon a year's notice, and the limit of the borrowing powers extends to 7,000,000*l.* of such bonds. The debt of 1,970,000*l.*, on security of East India Bonds may, for all that appears on the face of the accounts, be chargeable with a very different rate of interest, and its repayment not be subject to the year's notice. The estimate of the Receipts and Disbursements of the Home Treasury of the East India Company from 1st May of the present year (1858) to 30th April, 1859, sets forth, "Dividends to proprietors of East India Stock," 630,000*l.*; "Interest on the Home Bond Debt," 150,000*l.*; and finally, "*Interest on Money borrowed*," 120,000*l.* This last item marks the distinction between the temporary, or banking, accommodation, of Loans on security of East India Bonds, and ordinary Bonds positively issued. If a Loan had not been on the point of negotiation with the view of covering the whole of the estimated deficiencies of the year 1858-59, this distinction might not be worth insisting on. If, however, we are to arrive at anything like an approximate view of the real amount of Indian Debt as at the present time, we must keep in recollection that the basis on which the new Indian Loan of eight Millions has just been contracted, included provision against the liability to repay in October 1858, 1,000,000*l.* borrowed of the Bank of England, and 653,000*l.* of Bonds.

On the grounds set forth, it is preferred to retain the figures in TABLE F of 3,915,317*l.* as the amount of the Home Bond Debt.

It has already been observed that some later returns are now available* as to the Public debt of the Presidencies, which has hitherto been the chief means resorted to of covering deficits. This return states, that in addition to the Total Indian Debt at Interest on the 1st May, 1856, viz., 50,483,369*l.* (see TABLE F *ante*), the following Loans have been opened:—

* East India (Public Debt) Return to Mr. Crawford's motion. Ordered to be printed 13th April, 1858. No. 179.

Four-and-a-half per Cent. Loan, opened 30th August, 1856, closed } 16th January, 1857. Subscriptions in cash	£ 368,137
Five per Cent. Loan, opened 16th January, 1857. Sub- } scriptions in cash to 20th February, 1858	£3,788,788
Subscriptions in paper of the Three-and-a-half, Four, } and Four-and-a-half per Cent. Loans, to 20th Fe- } bruary, 1858	1,877,959
	<hr/> 5,666,747

Total raised between 30th April, 1856, and 20th February, 1858 6,034,884

This brings up the Public Indian Debt of the Presidencies to the aggregate amount of 56,518,253*l.*, and the annual charge of interest thereon to 2,440,480*l.*

And the data are now available for arriving at a more precise statistical view of the whole debt at the charge of the territorial revenues of India, than can be referred to in any published form.

Avoiding fractions of a thousand pounds, we arrive at the following summary :—

Summary of Public Debts (April, 1858,) including all Debts authorized to be raised.

Principal of Debt.		Annual Charge for Interest.
£		£
56,518,000	East Indian Public Debt of the Presidencies	2,440,000
3,916,000	Home Bond Debt.....	156,000
8,000,000	{ East Indian Loan of 1858 (now being raised, 5 Millions immediately, <i>i. e.</i> , between 8th April and 10th Sept., 1858, and 3 Millions when convenient)	320,000
68,434,000	Total charge on Indian Revenues exclusively.....	2,916,000
7,500,000	{ Capital Stock of the East India Company charged on the Indian Revenues primarily, but guaranteed by the Imperial Exchequer, 6 Millions of Stock, redeemable at 12 Millions, of which it appears 4½ Millions are already accumulated, leaving to provide, net,	630,000
75,934,000	{ Total Indian and Home Public Debts of the East India Company.....	3,546,000

The accumulation of Debt, even including the extraordinary expenses of the Afghan, Punjab, and Sind wars, and a large part of the charges of the Indian Mutiny of 1857-58, has been by no means so rapid as is frequently taken for granted by persons who profess an aversion from statistical inquiries.

Nothing can be more erroneous than the notion—(which, somehow or other, has widely spread)—that the Indian Territorial and Home Debt had been largely increasing in recent years before the mutiny, and that the finances of India have betrayed a chronic, incurable state of deficiency.

The increase in the nominal capital of the debt, has, all things considered, been moderate, and it is not the only, nor by any means the most important, point to be inquired into, for in a public debt, or in other words, in a mortgage of Revenue and Taxes, the amount of annual charge is the true test of the ratio of increase.

It will be desirable to make a comparison between the Capital and annual charge for interest on the Debts of all kinds, at 1st May, 1834, which date is immediately after the cessation of the Company's trading privileges (under the Act of Parliament 3 & 4 Will. IV, c. 85, taking effect as from 22nd April, 1834), and the capital and annual charge at 1st May, 1858.

1	2*	3*	4
East Indian Public Debts on 1st May, 1834.	Amount.	Rate of Interest.	Annual Charge for Interest.
	£	Per Cent.	£
Loans transferred from Fort Marlborough	1,851	10	185
Madras Permanent Loan	14,437	8	1,155
Remittable Debt, 30th June, 1822	7,474,210	6	....
Loan from King of Oude	563,909	....	....
Stipend Fund of the Bhow Begum	607,927	....	....
Madras Notes, under Advertisement, May 11	85,018	....	....
Madras Permanent Loan	10,137	....	....
Total of 6 per Cent. Loans....	8,741,201	....	524,472
Loan of 31st March, 1823	4,691,920	5	....
Loan of 1825-26	7,840,080	....	....
Loan of 1829-30	1,697,680	....	....
Loan from King of Oude.....	1,553,965	....	....
Loan from Individuals	28,515	....	....
Total of 5 per Cent. Loans....	15,812,160	....	790,608
Loan from Maharuck Ool Nissa Begum.....	1,627	4	....
Loan of 1824-25	123,110	....	....
Loan of 1828-29	52,120	....	....
Loan of 1832-33	5,104,850	....	....
Loan from King of Oude.....	315,769	....	....
Ditto Charity Fund.....	28,706	....	....
Total of 4 per Cent. Loans....	5,626,182	....	225,047
Grand Total of the above Registered Debts....	30,195,831	Avg. 5½	1,541,467
Temporary Loans.....	....	....	....
Treasury Notes.....	599,830	} Estimatl. Avg. 4½ }	236,570†
Deposits, including the Carnatic and other Funds	4,667,822		
Total Indian Debt, at Interest	35,463,483	Avg. 5	1,778,037

* Cols. 2 and 3 are from East India House Return of 9th April, 1858.

† This last Item can only be estimated by the charge of the year. It cannot, however, be materially inexact.

The data have now been collected for a sufficiently near approximate estimate of the comparative Debt and net annual Interest thereon at the two periods. These may be conveniently arranged as follows:—

Summary of Public Debts at 1st May, 1834, and 1st May, 1858.

Capital of Debt.			Annual Interest.	
In 1834.	In 1858.		In 1834.	In 1858.
£	£		£	£
35,463,000	56,518,000	{ East Indian Public Debt of the Presidencies..... }	1,778,000	2,440,000
...	3,916,000	Home Bond Debt.....	...	156,000
...	8,000,000*	{ East Indian Loans under special Acts of Parliament..... }	...	*320,000
35,463,000	68,434,000		1,778,000	2,916,000
12,000,000	7,500,000†	{ Capital Stock of the East India Company, less the accumulated Guarantee Fund..... }	630,000	†495,000
47,463,000	75,934,000	Totals	2,408,000	3,411,000
...	28,471,000	{ Differences, more in 1858 than in 1834 .....	...	1,003,000
...	60°	Per Cent. more in do. do....	...	42°

Whilst the increase in the nominal capital of the Debt has thus been about 28½ Millions Sterling in 24 years, or 60 Per Cent., the increase in the annual charge for Interest has only been about 1 Million Sterling, or 42 Per Cent. This difference in the percentages is accounted for chiefly by the improvement of the credit of the British administration in India, as indicated by the calculations respecting the average rate of interest payable on the Loans of the Presidencies, which in 1834, as has just been shown, was about 5 per cent., and in 1858, about 4½ per cent.

Adhering to our former proposition that the comparison of the annual charge for interest is more effectual and correct, than any comparison of the nominal principal of a Public Loan; let us now briefly investigate whether the augmentation of 42 Per Cent. in the Interest Charge on the Debt, in the 24 years since the East India Company ceased to possess its trading privileges—i. e., in the period from 1st May, 1834, to 1st May, 1858—has been excessive or not.

* Including the charge for the whole of the 8,000,000*l.* proposed to be raised for the service of the year, 1858-9.

† This item is given at a different amount at the two periods, because in a comparative statement of this kind it is necessary to credit the liability to Proprietors' Capital and Interest by the accumulated Capital and Interest on the Redemption of Capital Guarantee Fund.

One of the chief statistical standards for estimating this, is obviously, the Revenue at each of these dates.

Now, the gross Indian Revenue for the year 1833-34 was about 18½ Millions; and the estimate of the Gross Indian Revenue for the year 1857-58 may, on the best available authority, be taken at about 29 Millions sterling. The increase in the Revenue has therefore been 59 per cent.

The ratio of increase of the Revenue has, it is plain, been 17 per cent. more rapid than the ratio of increase in the charge of the Debt, notwithstanding the large expenses which have been defrayed, during the Twenty-Four Years 1834-1858, in the annexation, settlement, and survey, of several vast territories and populations; and notwithstanding the charges of arresting offensive wars and mutinies. And if, further, we take into consideration the fact, that the foundations of useful, prudent, and productive enterprises and works have almost exclusively been laid during this period of time, and some of them brought to a successful completion, we shall not be justified in agreeing with those who sweepingly assert that the Finances of British India have long been on the decline.

It is well known to those who will take the trouble of reflecting on the facts of the Indian Revenue, that the deficits of the last few years would not have existed had it not been for the increased expenditure on productive Public Works, which (as set forth in Colonel Sykes's Paper read to this Society in January last), amounted, exclusive of Military Works, to about One Million and a Half Sterling during each of the four years included in his observations. The Chairman of the East India Company has subsequently quoted some statistics to the House of Commons, which extend the figures a little further in date. The following are his remarks, as reported :—

"The statement he (Mr. Mangles) was about to read to the Committee undoubtedly contained some military works which were not of a remunerative character; but, on the other hand, nothing was charged for the repairs, or for the salaries of the engineering officers by whom the whole had been carried out. The one might, therefore, be set against the other.

	Revenue. £		Public Works. £
1852-3 Surplus	424,257	.....	592,516
1853-4 Deficit	2,044,117	.....	952,103
1854-5 "	1,707,364	.....	1,818,978
1855-6 "	972,791	.....	2,279,539
1856-7 "	1,981,062	.....	1,839,575
Total Deficit.....	6,281,077		7,474,711

"Thus in the last five years upwards of a million sterling has been expended in public works more than was required to make the revenue balance."*

* See debate in Committee on the Resolutions upon the Government of India. 30th April, 1858.

In considering Statistics of this kind, the Statistical Society should not neglect to notice that a loan was raised in India in March 1855 ; which, at 1*s.* 10*d.* per Company's Rupee, represented a Sum of 2,577,141*l.* Sterling, expressly in aid of Public Works. It cannot, therefore, be maintained that there was positively no real immediate deficit in the 5 years 1852-3 to 1856-7. Still, the admission cannot in fairness be refused, that a deficit thus arising, is, (paradoxical as it may seem in the crude statement,) capital invested, and probably well invested; for all experience leads to the belief that the best method of lightening the burdens of the people of India, is the timely and energetic use of the powerful element of public credit applied with special regard to the wants and resources of the country.

Indian financiers (as I hope to show in the next section of this paper), have long been profound masters of the refinements of taxation ; but they have ever been ignorant of those means which have constituted the foundation of the material success of Western civilization in the old world and the new.

The allusion which has just been made to the Public Works Loan raised in India in 1855, leads to the remark, that the way in which the notifications of this and other Indian Debts of the Presidencies have been gazetted, as well as the Forms in which they have been issued, justify these three inferences:—

(1). That the public territorial debts, nominally assigned to separate Presidencies of India, are not distinct charges upon the security of the Revenues of the single Presidency only.

(2). That the Revenues of one Presidency are not primarily liable, nor those of all or any of the other Presidencies only secondarily liable, but each guarantees the rest.

(3). That if all Revenue were lost from any one Presidency, or in other words, if we relinquished the possession of its territory, the liability under the debt would devolve upon the other Presidencies, and in such event, would still have to be discharged to the creditors generally.

These are substantially centralized, as opposed to localized, conditions of Finance; but, with all due deference to those who are better qualified to form a right judgment on the special applicability of such a system to Public Works' Loans in India, I am inclined to doubt its expediency or advantage. It appears to me that it would not only be more equitable, but that it would promote infinitely more of native co-operation, if the security were restricted either to separate Presidencies, or to separate large Districts or Collectorates, instead of extending it to the whole of the Indian Revenues;—the result would be, a more effectual enlistment of local and native knowledge, interests, and sympathies in useful and profitable public

works. Colonization, whether by Europeans or by natives of India,* of select and healthy regions adapted for the growth of particular products, might also be very materially facilitated through the medium of such a beneficial interest in financial improvement.

One of the lessons of an experience which our country has gained in India, after a deplorable sacrifice of the brave life and heroic virtue of some of the noblest of its children, is, that military occupation alone can never retain its possession. It must be seconded by more active progress in developing the resources of the soil, under the direction of the British, but conjointly with, and chiefly through the better employment of, the labour of the native population. Whilst a wise economy is undoubtedly a great desideratum in India, as elsewhere, nevertheless its opposite extreme, a parsimonious policy, would sooner perhaps than in any other part of the world, destroy every prospect of the wished-for progress.

III.—*Fiscal conditions that regulate Indian Finance, compared with those applicable to British Finance.*

Consideration of historical evidence is essential to any due appreciation of fiscal systems in those countries of Europe where precedent and ancient institutions flourish. This may seem a truism, but such an objection may be borne with, as it will serve to place in stronger relief the circumstance that the same course must even more fully apply to any investigation of the rationale of the Indian fiscal system, in which the memory of ages gone by is the reality of to-day. The Hindoo, bred in the same debasing idolatries as his ancestors, and the Mussulman, shackled with the intolerances and infallibility of his law, are always looking back from the British century of power to an antecedent state of things; their minds are loth to grasp the idea of progress and change.

The more our Indian fellow-subjects study their own annalists and historians, the deeper are they imbued with ideas unfitted for the present day. They drink at a poisoned source, which exalts the principle of the exploitation of the many for the good of the few; the glitter, pomp, and show of the ruler and his satellites, at the expense of the grinding poverty and starvation of the subject. They naturally recur to the most striking example of administrative éclat which their records present. They point with some pride to the rule of Akbar, whose dominion was greatly more extensive, and

* The number of *Europeans* in the service of the East India Company in the three Presidencies of Bengal, Bombay, and Madras, did not amount to more than about 40,000 in the year 1851. This included women and children. The total divided as to sex gives about 29,000 males and 11,000 females. The number of Europeans not in the service of the East India Company does not appear to have been returned to the English Census Commission of 1851. Its total is believed to be very small.

whose revenue was some forty or fifty times larger, than that of his contemporary, Queen Elizabeth; but they are slow to perceive that even the wisdom of an Akbar failed to lay the foundations of methods which could permanently conduce to the wealth and well-being of the people.

The revised Land Assessment of Akbar and his finance ministers, Tudor Mull and Mozuffer Khan, the formation of which dates from A.D. 1578 and 1579, errs against the just principles of the proportionality of Taxation. It was an attempt to lay the whole burden of taxation on the Land, and to remit the other sources of revenue from indirect and direct taxation levied under the authority of the Mahomedan law. There is no satisfactory evidence that it was successfully applied, in practice, even in Akbar's reign, or that the Taxes said to have been remitted were positively not exacted. This much appears certain, that they soon had to be reverted to. Whether, however, a system of taxation be eclectic like Akbar's, or general and regulated so as to fall on all descriptions of property, its result under native rule, ready to gather without planting, and to reap without sowing, neglecting to promote industry and energy among the people, or to allow them to recover from perpetual and harassing exactions, was inevitably one of collapse. This method of taxing may be compared with a chronic habit of bleeding, without leaving breathing time, or affording rest and nourishment.

Under an impoverishing condition of aggressive, despotic, and civil wars, the eclectic system of raising an undue proportion of revenue from direct sources was as prejudicial as would have been exclusive indirect taxation. A due admixture of both methods is the only one which could provide for a lengthened period against the exhaustion from such a drain on productive resources.

It is by no means uninteresting to compare the ancient Indian and English systems of taxation. It is here proposed to give some brief remarks on the somewhat remarkable parallelisms which may be traced between them; these are arranged in the following Tabular statement.

The leading source of information on the Mahomedan system of Revenue and Taxation in India is the *AYEEN AKBAREE*, or Institutes of Akbar. From notes on English versions of the portion of that work which relates to these branches of administration, the first column of the next TABLE, H, has been compiled. Its first eleven items (under the letter A) show the Taxes in chief under the general provisions and basis of the Mahomedan law in vigour in India from the commencement of the Eleventh Century. The next thirty items (under the letter B) show some of the principal of the Taxes of a subsidiary kind, which were generally and simultaneously imposed. The latter, and other analogous imposts, are said to have been repealed

by Akbar, but succeeding sovereigns were obliged to re-impose them to make up their revenues. Akbar is also asserted to have repealed the majority of the more important taxes first above referred to, particularly the Poll-Tax, which, obnoxious and opposed as it was to the feelings of the people, was nevertheless immensely productive.

In the second column of the Table, the Indian nomenclature of the Taxes is given, chiefly upon the authority of the author of "Observations on the Law and Constitution of India." (London, 1825.)

In the third column are appended some brief notes on the parallelism which it appears to me may be drawn between the fiscal systems of India and England; and these may, perhaps, be found sufficient to indicate, that in ingenuity and expansiveness of plan, the Tax collectors of the East have always been fully up to the mark of their brethren in the West, and in many respects have surpassed them.

TABLE H.
PARALLELISMS of the INDIAN and ENGLISH SYSTEMS of REVENUE and TAXATION.

1	2	3
INDIAN TAXES.	Indian Nomenclature.	Notes and Remarks on TAXES of a precisely similar, or nearly analogous, nature in ENGLAND.
(A).—TAXES IN CHIEF under the general provisions and basis of the Mahomedan Law.		
I. TITHES, commuted into Land-Tax (see No. II.), as the Mahomedan law does not permit Tithes as well as Land-Tax to be levied on the same Land	Ooshir	Tithes.
II. LAND-TAX	Khurauj	Land-Tax.
III. TRIBUTE .....	..	Tributes from Scotland, &c., swelled the Revenue of England in mediæval times. In modern days it indirectly derives some benefit from Indian Tributes.
IV. CUSTOMS	Ooshir-oot tujaurut	Customs.
V. CATTLE TAX on Camels, oxen, sheep, and goats	Zukaut	A Poll-Tax on Sheep was levied in England by the 3 & 4 Edw. VI, 1549: repealed in following year.
VI. PROPERTY TAX of $2\frac{1}{2}$ Per Cent. on Gold and Silver bullion, Coin, ornaments, and Plate. PROPERTY AND INCOME TAX, $2\frac{1}{2}$ per Cent., <i>ad valorem</i> , on Stock in Trade, and on Profits derived from any kind of moveable or personal property	Zukaut	Property Taxes on Gold and Silver Bullion, Coin, &c., can be traced in England from the time of Henry II (A.D. 1188), and, through the medium of the Land-Tax Assessment, down to the period of the Commonwealth. Income Taxes on Stock-in-Trade, and on Profits therefrom, and from personal property generally, from the same date (1188), and even previously, down to the present time.

TABLE H.—Continued.

1	2	3
INDIAN TAXES.	Indian Nomenclature.	Notes and Remarks on TAXES of a precisely similar, or nearly analogous, nature in ENGLAND.
VII. POOR RATES. Alms for the relief of the poor, including expiatory sin-offerings, and votive-offerings. The Alms were payable on the <i>ced</i> or festival of <i>fetr</i> , soon after the <i>Bumasaun</i> , or Mahomedan Lent, but only by Moslems of age, male and female, who, besides house, furniture, &c., and labouring slaves, possessed 200 Dirhums of property. (Taking the Dirhum at 94d., this represented the sum of 7l. 18s.)	Sadukut-oal <i>fetr</i>	A distinct parallelism is to be drawn for the period previous to the Reformation in the offerings to shrines and altars, and the endowments of churches and monasteries which dispensed alms to the Poor. After the Monasteries and Religious houses were suppressed we have the Parliamentary legislation of 43 Elizabeth, c. 2, the foundation of our English poor law.
VIII. POLL TAX. From the wealthy, or owners of from 10,000 to 15,000 Dirhums of property, i. e., of from 395l. to 593l., 48 Dirhums per annum (i. e., about 89s.) From the middle classes, possessed of property, but not independent, 24 Dirhums (i. e., 19s.) per annum. And from the labouring classes, 12 Dirhums (i. e., 9s. 6d.), payable by monthly instalments of 1 Dirhum (9½d.) This Poll, or Capitation Tax, was unpopular in India, often repeated and revived, and finally done away with in 1746.	Jizeeah	Poll Taxes, sometimes at a uniform rate, and at other times on a sliding scale, according to wealth or dignity, were levied, in the face of much opposition, as far back as by sovereigns of the Plantagenet line. The Parliaments of Henry VIII and Charles I revived the Tax temporarily, and with better success in its collection. The last revival was in the reign of William and Mary, when it expired in the midst of general unpopularity and discontent at its incidence.
IX. ROYALTY, ON War Prizes or Plunder, Mining Produce, Treasure Trove, and Wrecks. This was termed "Fifths," such being the Sovereign's share according to the Koran.	Khooms	War Prizes, Ransoms, and Plunder, Mining Royalties, Treasure Trove, and Wrecks, belonged, in chief measure, to English sovereigns from the earliest times, but their share was greater than one-fifth. In theory they were entitled to all.
X. ESCHEATS; property falling to the crown, in default of legal heirs, or by confiscation for difference of religion, barring inheritance if either party thereto be a Moslem.	..	Feudal escheats in England from Saxon and Norman times down to the abolition of the Court of Wards and Liveries, <i>temp.</i> Charles II. Since then escheats from failure of heirs only.
XI. WAR TAXES.....	..	The only special War Taxes in England, called Benevolences, were at first assumed to be voluntary, but soon became obligatory exactions.
(B.)—SUBSIDIARY TAXES levied by the Mahomedan Sovereigns.		
1. Tax on Marriages, by a variable scale, according to the wealth and position of the parents, varying from 20 mohurs to 2 dams.	..	For about ten years, commencing from 1695, a Marriage Tax existed in England. The feudal rights to Fines on Marriages may also be referred to.
2. Succession or Introduction Taxes	Peesh kush	Court Fees on Installation, accession to Peerage, &c.
3. Port Duties, Admiralty dues	Meer buhree ..	Port and Admiralty Dues.
4. Tax on convocations assembled to settle business, and levied on each person.	Kuresace ....	....

TABLE H.—Continued.

1	2	3
INDIAN TAXES.	Indian Nomenclature.	Notes and Remarks on TAXES of a precisely similar, or nearly analogous, nature in ENGLAND.
5. Tax on oxen	Gaoshumaree ..	....
6. " " Fruit-trees	Siré deruktee ..	....
7. " " Artizans	Furook Aksam peahah	....
8. " " Sale of Cattle .....	..	....
9. Market Dues	Hasile bazar ..	....
10. Tax on hemp, blankets, ghee or oil, raw hides .....	..	....
11. Tax on measuring land .....	..	....
12. " " weighing .....	..	Stamp on weights and scales.
13. " " for killing cattle .....	..	....
14. " " on tanning .....	..	....
15. " " gambling with dice .....	..	Stamp duties on dice.
16. " " sawing timber .....	..	....
17. " " Transit passports	Rabdarce ....	....
18. Hearth Money .....	..	Hearth Money.
19. Tax on Buyer and Seller of Houses .....	..	Auctioneer's license.
20. Tax on Salt made from earth ....	..	Salt Tax finally repealed in England in 1836.
21. " " the commencement of reaping	Bilkutty .....	....
22. Tax on Lime for building .....	..	....
23. " " Spirituous liquors .....	..	Excise on Spirits.
24. " " Brokerage .....	..	Transfer Stamps.
25. " " Fishermen .....	..	....
26. " " Mint Taxes .....	..	Seignorage on coinage of Gold from a very early period in England, discontinued in 1666, continued on Silver and Copper coin.
27. " " Coin or Bullion Dealers.	Surraufee ....	....
28. Tax for Police officers	Daroghance ..	Police Rates.
29. " " Under-collectors	Tesseeldarce ..	....
30. " " Money-triers	Fotahdarce ....	....

The preceding long catalogue of Taxes does not merely represent an ancient state of things which has become obsolete. On the contrary, it is almost unchanged at the present time, in those parts of Hindostan where Native rule still continues. It rather falls short of, than over estimates, the subtle ramifications of the fiscal system there prevalent. As examples in point, it is interesting to observe what were the facts in the two comparatively recent annexations of the Punjab and Sind.

As regards the PUNJAB, reference may with advantage be made to a remarkable Document which has deservedly reflected much honour on the distinguished Administration of whose talents and public spirit it will be an enduring monument. The allusion here is to the "General Report on the Administration of the Punjab for the years 1849-50 and 1850-51." (Printed for the Court of Directors of the East India Company: London, 1854). In referring to the system of Taxation under the ruler who had immediately pre-

ceded the English, and whose territory was finally annexed in the spring of 1849, Sir Henry Lawrence, Mr. John Lawrence, and Mr. Robert Montgomery state (see paragraph 299):—

“Under Ranjeet Sing the whole country was threaded with a net work of preventive lines.

“These lines were dotted with innumerable posts for the collection of every kind of tax, direct and indirect. At the same set of stations, excise and customs-taxes, town-dues, transit-duties, capitation-imposts, artisan-fees, were all levied. The principle was to extract taxation from everything indiscriminately. No distinction was made between domestic and foreign industry, between articles of indigenous and extraneous production, between manufactures at home and abroad. The artisans of Lahore and Umritsur were taxed, together with the goldsmiths and ironmongers of Cabul; the silks of Mooltan and the cloths of the Punjab were no less dutiable than the cotton goods of Europe; the shawls of Cashmere, the groceries of Cabul, the dried fruits of Central Asia. The cotton, indigo and sugar of the Punjab, had to pay an excise about equal in amount to the customs levied on the same produce imported from Hindostan. Nor was salt the only necessary of life subject to taxation; ghee, tobacco, vegetables, all the poor men’s luxuries, were placed under contribution.”

The above quotation is shortened to make room for the following passage in the context, which is of importance and interest as showing that a thorough system of mixed direct and indirect Taxation is an effectual preservative from a disturbance of the proportionality and equity of Taxation (see paragraph 300):—

“But, on the whole, the taxation could not be called uneven, inasmuch as it embraced everything; every class from the richest to the poorest, every locality, every thoroughfare, every town and village, every article, wherever sold, imported or exported, domestic or foreign. That such a multiform system of taxation did not harass the people, fetter trade, and produce oppression, can scarcely be supposed; but still commerce did somehow thrive, and a sturdy people grew and multiplied to a degree which, under such disadvantages, European political economists would have thought hardly possible.”

With respect to *SINDE*, it will be convenient to arrange, in the following TABLE J, a list of the Taxes repealed soon after that country was conquered. The original materials will be found in the Return to Order of the House of Lords (163/53). We need only here remark, that many of the Items can be traced to their counterparts in the TABLE H which we have just now been considering.

It is particularly to be observed that direct taxation by native governments in the form of Income and Property Taxes, prevailed from time immemorial; and there is no doubt that such taxes were imposed long before the Mahomedan period by the Hindoo Code of Menu.* Direct Taxation by Income and Property Tax has, however, been abolished by the British Administration in India. This will be further referred to in the next part of these remarks.

* See, *post*, under head of (4) *МОТОВНА*, in the fourth section of this paper.

TABLE J.

Descriptive Statement of TAXES REPEALED IN SINDE during the Governorship of the late Sir Charles Napier, from 1843 to 1848.

Description of TAX.	Description of TAX.
1. Rahadaree or Transit Duty	16. Punacherree or Grazing; Tax levied on the Muncher Lake
2. Tax levied on Goods exported and imported within the Province. (Land Customs)	17. Thul Burath; Tax from Mussulmen on their Festivals
3. Chowth Shurafee; Tax levied from Shroffs on account of Exchange of Coins or Goldsmiths' Contract	18. "Choongee;" Fee on Grain at Sehwan
4. Mochee Poorah; Tax levied from Tanners of Leather or Tannery Contract	19. Chickendose; Tax upon Silk Embroiderers
5. Zar Cohee; Tax levied from Manufactures of Gold Leaf, or Arsiduc Contract	20. Tufed haf; Tax levied on Cotton Fabric Manufacturers
6. Kinura; Tax levied on a kind of Red Colour manufactured from the Bark of a Tree	21. Tax levied on Ivory Manufacturers or Turners
7. Keermeez Tax; a Tax on Cochineal	22. Ruin Sax; Tax levied from Brasiers
8. Duin; Tax on Curds	23. Nidaff; Tax levied from Cotton Cleaners
9. "Dulalee Tobacco;" Tax levied from Brokers dealing in Tobacco	24. Coombar; Tax levied from Potters
10. Daran Teerath; a Tax levied from Pilgrims proceeding to the annual Fair at the Hot Spring at Lackie	25. Sonar; Tax levied from Gold and Silver Smiths
11. Dhur Tharazoo; Tax levied from certain privileged Grain Measurers existent in all principal Cities, where all the Grain imported was measured by them alone, in consideration of which Privilege they levied a certain Fee from the Importers	26. Paish Cash and Sheu Soomaree; Poll Tax
12. Bhayath and Meer Imarath; Tax levied on Fruits produced in Gardens, and the latter on Houses and Building Materials sold	27. Tax levied on Butchers
13. Kirmith; Tax levied on Sweetmeats made of Sugar, during the Hindoo Festival of Dewallee	28. " " on Corn Grinders
14. Tax on the Marriage of the Poorer Classes	29. " " on Vegetable Sellers
15. Tax on Carpenters	30. " " from Shopkeepers
	31. " " on Oil Manufacturers
	32. " " on Fish-sellers
	33. Moree; Tax levied on Boats anchoring at any Port in the River.
	34. Russoom Canagholl; Tax on Goods transported to any Place, independent of the Levy of the Customs Duties
	35. "Doorkanee;" Tax levied on the opening of new Doors and Windows of Shops
	36. "Puim;" Tax on Rushes for making Mats
	37. "Nurruck Rogun;" Tax levied when the Rate of Ghee was high in the Market
	38. Athusabazee; Taxes on the Makers of Fireworks

There remain to be noticed some of the distinguishing features as respects the origin and incidence of the Indian Land-Tax.

A century has not yet elapsed since the East India Company became sovereign landlords and collectors of revenue on their independent account; when Bengal, Behar, and Orissa were ceded to them, and the donor called the gift the "paradise of the world." What may be termed the modern System of Revenue was inaugurated under the government of Lord Cornwallis. In 1793 was passed the

first of a series of regulations and acts which have been continued to the present time by a rapid succession of amendments and reforms. Previously, and dating from the administration of Clive, efforts had been made in the same direction. That period was, however, one attended with the difficulties of an experimental, or provisional, kind of legislation, and with the pre-occupations of military events.

Between 1772 and 1793, four Committees of the House of Commons deliberated on Indian affairs—the memorable administration of Warren Hastings had taken its place in history—the Board of Control had been instituted.

In the interval different Land Revenue systems had been tried. Annual, quinquennial, and decennial, settlements were tested; but no radical change of the plans of native rulers had been essayed. In the pursuit of revenue, much of the oppression and exaction of those rulers had been continued. These characteristics were not simply the results of the decline of the Mogul empire. In the Hindoo, as well as in the Mahomedan, system, may be traced the origin, common to all great empires, of the military conqueror parcelling out the possession of the land, retaining a share of the produce for himself and his immediate followers, and distributing grants Rent-Free, or subject to conditions, more or less onerous, of special tenure.

Both the Hindoo and Mahomedan plans seem to have proceeded upon the sovereign's share being calculated on the gross produce, and not on the net produce or rent remaining after the expenses of cultivation are deducted. The Hindoo belief was, that in remote antiquity the earth became, by conquest, the property of the holy Parassā Rama. That this individual, or Demi-god, presented the earth in free gift to the sage Casyapa, who, in his turn, committed it to the soldier-tribe or caste of the Chatriyas, because of their protective powers. That from them it passed into the proprietorship of successive conquerors, and not into that of the cultivators or subjects. But the latter might acquire property by payment of annual rent, or rent for terms of years. If this rent was not paid, the contract was annulled. And, where there was no special agreement, a bidder for the land at a higher rent could oust the actual holder at the expiry of the annual, or term, tenancy. And by rent a given proportion of produce, and not a specific amount of money, was implied. Theoretically* the Hindoo sovereign's legal proportion was one-sixth in ordinary time, and one-fourth in War time. But it is not to be supposed that the Hindoo rulers of ancient days were a whit better, or more lenient, than their Moslem successors, who soon extended

* See Colebrooke's works; the late Professor Jones of Haileybury's unfinished *Treatise on Rent*, &c.

the proportion to one-third from lands of the usual class, and to one-half from lands naturally irrigated by flood rivers.

The rule, of conquest conferring proprietorship, was preserved, in the fullest integrity, by the Mahomedan code. The theory and practice of its operation are very clearly defined in the following extract from the anonymous work entitled "Observations on the Law and Constitution of India, &c.," (London, 1825), which has been before referred to. The author states (p. 97):

"By the Moohummudan revenue laws a distinction is made between the *Moslem* and the *Zimnee*, or non-Moslem subject, to which it is necessary to attend. This distinction is great with respect to the land revenue; but it is applicable, only, to the land of *Arabia Proper*, and to conquered provinces, when the lands are divided amongst the conquerors. Thus the Moslem pays the *Ooshr*, or tithe of his crop; the Zimnee, the heavier impost of *Khurauj*, which by law may amount to, but cannot exceed, half the produce, i. e., five tithes. But, on the other hand, the Moslem is liable to several annual and occasional taxes, from which the Zimnee is exempt, amounting to about two or three per cent. of his property (not of the produce merely), under the name of *Sudukah* and *Zukaut*, or pious benevolences. I use this word because the English reader will recognise it.

"But as India was conquered by force of arms, and the inhabitants were suffered to remain in it, and their lands were restored to them on paying the capitation tax and the *Khurauj*, or land revenue, by law the whole land of India is *Khurajee* land, the Hindoo and other inhabitants, unbelievers, are Zimnee, and the land is liable to the *Khurauj*, whether it be in possession of a Moslem or a Zimnee. This is the law of Moohummudan conquest; and the fact corresponds with the law. By law the *Ooshr* and *Khurauj* cannot both be exacted from the same land; consequently, in India, the land revenue, payable by a Moslem and a Zimnee, by law, would be the same, and so *de facto* it was."

Proprietary right of the state to the rent; and possessory, but subsidiary, right of the subject to the land; were thus clearly defined by the Mahomedan law. In every ordinary sense of the term, the chief landlord was the State. And the British government holds that position in India by the same rule of conquest which has prevailed there from time immemorial in the Mahomedan and Hindoo dynasties. The parallel as to origin and principle of such a right is so complete with that of the feudal tenures and land-taxes, of Europe, and of England in particular, that we may merely restrict our notice to the fact.

We now pass to a point of practical importance, viz.: LAND-TAX REDEMPTION so far as applicable to INDIA.

The plan of rendering the Land-Tax permanent in amount, was adopted by statute in India, about four years before it was so in Great Britain. It is true that in this country a given maximum never had been exceeded in the Acts passed from year to year since the time of William and Mary, but permanent legislation did not take place until Mr. Pitt's Act was passed in 1797; whilst, in Bengal, the Marquis of Cornwallis had carried into effect his Perma-

nent Settlement, in 1793. But there is a highly important distinction to be remarked, rendering the analogy less substantial than would at first appear. Mr. Pitt introduced his Land-Tax measure, in order to render perpetual a legal claim of the State to a certain reserved rent, of customary fixed amount, and which constituted at the time no more than about *Ten* per cent. of the British Revenue.* Lord Cornwallis introduced his Land-Tax measure, in order to render perpetual a legal claim of the East Indian government to a reserved rent, which had not, by custom, been of fixed amount, and which constituted at the time as much as *Fifty-six* per cent. of the whole Bengal Revenue.

There was a difference, therefore, both in the circumstance of the customary fixity of amount in the one instance, as compared with its indeterminateness in the other; and in the circumstance of the far greater comparative moment of such a step as a permanent renunciation, in India, of the power of increasing rent, which there formed the leading item of revenue. In the United Kingdom, the equilibrium and proportionality of taxation, has, all things considered, usually been as well adjusted as could reasonably be expected; and Mr. Pitt's financial discernment was never more conspicuous than in his promotion of a mixed system of direct and indirect taxation as the most efficient aid to such an adjustment. In India, owing partly to its inferior civilization preventing representative government, re-adjustment of methods of taxation is more difficult and more experimental.

And, if these grounds have weight, they certainly lend force to the conclusion that the permanent settlement of the Government Rent, or Land Tax in the lower provinces of Bengal, was an improvident and unwise measure. That the motive of its institution was upright and well-intentioned is not doubted, but it is a branch of the question which does not belong to the present line of inquiry. Fortunately, too, the measure is limited to the comparatively narrow area to which it was applied at the outset. The Statistics in the first part of this paper will enable some idea to be formed of its size and population, contrasted with the rest of British India; and the reader will judge whether an extravagant amount of controversial literature has not been wasted in India, and in this country, upon the debateable points of conditions that apply to a section of the community of India, which, owing to the annexations of territory that have gone on (almost continuously) during the lifetime of the present generation, has ceased to possess the nearly exclusive importance it once had.

By this, it is not meant to be contended that the Lower Pro-

* In estimating this proportion, it has been considered right to take the ordinary revenue of Great Britain in 1797, *exclusive* of all receipts from Loans. If the latter were included, the proportion would be reduced from 10 to about 5 per cent.

vinces of Bengal have not the fullest title to the warm interest and attention which the Indian administration direct towards them. Far from such a view—The progress and condition of their population are bound up with the earliest associations of British rule,—and all that the preceding remarks are intended to convey, is, that the time and debate that used formerly to be bestowed upon the permanent settlement of Bengal, in arguments for and against it, can at the present day be more profitably directed to the consideration of other matters, upon which a right judgment really affects the welfare of the people of the whole of India. The permanent settlement of the Land Revenue, so far as regards a part of a Presidency, and amongst a portion of these people, is an established fact; and this can never be disturbed without breach of faith such as we refuse, as Englishmen, even to entertain.

There is a single useful question branching out of this subject, namely:—*How the conditions of the Permanent Settlement can best be utilized?*

Acting upon the precedent of the principle of Mr. Pitt's measure, which rendered the permanent British Land Tax redeemable, a similar course has sometimes been suggested for India. Upon the maturest reflection I have been able to give to the principles involved in those methods of redemption, (which however inefficiently, were described with some pains in my paper on British Land Tax, inserted in the last volume of the Society's Transactions), it appears to me that the extension of too wide a generalization of a Redemption of the Land Tax would be as wrong as, and far less excusable than, the permanent settlement itself. If, however, the carrying out of such a suggestion were restricted in its field of operation distinctly to Bengal alone, or rather, to those portions of the Bengal Presidency where the Permanent Settlement is an existing institution of the country and cannot be reversed, there do not appear any valid objections to a Land Tax Redemption being effectually carried out.

The method should be a cancelment of Land Tax in exchange for a transfer and cancelment of such an amount of nominal capital in the Indian Public Debt, as produces an annual dividend precisely equal to the Land Tax redeemed.

At 5 Per Cent. Interest, each Million of Land Tax so redeemed in exchange for its equivalent in Indian Stock, would pay off Twenty Millions of the Debt, or at $4\frac{1}{2}$ Per Cent. Interest, 22,222,000*l.* would be similarly paid off.

A redemption of about Sixty-two Per Cent. of the Bengal Land Tax, say of 2,916,000*l.*, out of 4,688,000*l.* (its aggregate amount as in 1855-6), would pay off the *whole* of the existing Public Debt of the East India Company charged on the Revenues of India, which, as already shown, amounted (exclusive of the Capital Stock, but in-

clusive of the 8,000,000*l.* of Loan to be raised for the Mutiny Expenses) to the Sum of 68,434,000*l.*, on 1st May, 1858.

A redemption of this kind, not obligatory, but purely permissive, and to be acted upon at the Landholder's own wish, and when his means admitted, would be gradual and self-adjusting; but probably neither the requisite funds, nor the inclination to redeem, would be found wanting in Bengal.

The operation is one of balance or interchange of two equivalents. Instead of the British government in India paying with one hand to the Stockholders of the Debt about 2,916,000*l.* of annual interest, and receiving with the other hand from the Bengal Landholders about 4½ Millions of annual Land Tax, it would eventually write off 2,916,000*l.* of Land Tax, and the whole amount of the existing Indian Debt would be cancelled.

It must, however, be observed, that as the rate of interest on the existing nominal capital of the Indian Debt is 4½ per cent., any possible advantage from some future reduction of Interest would be prevented from accruing. As this is a deferred contingency, its pecuniary effect upon the final result of a Redemption measure is not of much importance. On the other side, it should be noticed that the immediate expenses of collecting the Land Tax in Bengal are 6 Per Cent., or about 175,000*l.* per annum on the portion of that tax represented by the sum of 2,916,000*l.* just referred to; and these expenses would be entirely saved by the Redemption. The cost of administering the Debt, or in other words, the management expenses of paying Dividends of 2,916,000*l.*, would also be saved.

But the whole measure of the good it would accomplish is not to be expressed in the mere money result. The middleman, and the inferior servants and agents who are said to oppress the Bengal Ryot, would be more restrained from the power of exercising their love of exaction. And where the state receives, as in Bengal, so large a portion of the Rent of the soil, and can disburden itself of the position of chief landlord without any sacrifice, as it would there be enabled to do, it is highly politic thus to increase the number of its freeholding subjects, and at the same time to limit their opportunities of oppressing the poorer and harder-working classes. The wealth of the country would be much promoted by the formation of an independent middle class; industrial enterprise would have a better chance of success; a larger revenue from taxation, whether indirectly or directly, would be easier met; European imports would increase; the execution of productive public works would be facilitated; and benefits of the utmost moment to the people of India, and to this country, would be the sure result.

IV.—*Facts and Statistics bearing upon the past history and progress of Revenue and Taxation in British India, during the sixty-four years 1792-98 to 1855-56.*

The progress of the Revenue of India is a subject which cannot be reviewed, even in a general manner, except the inquirer be content to face considerable labour in analyzing and condensing particulars interspersed in a great variety of financial statements. As some evidence of the extent of the surface to be gone over in any complete review of them, it may be noticed that, for one year only, the volume of accounts of territorial revenue and disbursement, as now presented to Parliament, occupies some seventy folios. The Home Returns (presented annually under the same Act of Parliament, 3 & 4 Wm. IV, c. 85) take up about twelve folios. Most of the Returns are comprehensive and well arranged, and the fifty, or thereabout, of separate statements contained in the first or Indian volume of returns, not only include the audited or passed accounts of the particular year to which the volume specially applies, but also an estimate for the succeeding year, and comparative statements respecting these two years in juxtaposition with the figures for the two previous years.

In so extensive a government it has not hitherto been found possible to get in and print the final accounts until the lapse of a longer time than might be wished. For instance, at the present time (April, 1858), the last Return printed is that for the financial year 1855-56, that is, ended 30th April, 1856, so that in practice no final statement is before the public which is not about 2 years in arrear or say nearly $2\frac{1}{4}$ years old; and it follows, that the provisional estimates are one year, or more nearly, $1\frac{1}{4}$ year old.

Whilst the annual returns just indicated are pre-eminently the source of information as to the finances of any particular year, the student who has regard to the necessity for economizing his time and labour, in the collection of data to enable him to arrive at a broad and general view of the progress of the several branches of Indian Revenue, will accomplish that object to some extent by making use of the Revenue Statistics contained in the House of Commons Papers 836/55 and 16/57.* In these papers are given the figures of each head of Taxation, in each Presidency, since 1792. The amounts are stated throughout in Pounds Sterling, at the uniform rate of Two Shillings the Company's Rupee. The Gross annual receipts show an

* The first-mentioned paper is under the title of "Land Tax (East India)." Returns to Mr. Blackett's motion. Ordered to be printed 22nd June, 1855.—The other paper is under the title of "East India (Revenue)." Return to Mr. Arthur Mills's motion, in continuation of the above. Ordered to be printed 11th December, 1857.

excess over the annual Parliamentary returns from the year 1836-7, owing partly to this method of converting the revenue into sterling, and further, by the deduction in a different manner in the Parliamentary accounts, of the cost of collecting the revenue.

The Statistics contained in the returns here referred to, would take up at least Forty Pages of the size of the Statistical Journal to reprint in full, and even then we should only have before us the undigested material. For the purposes of the present paper, it has been deemed desirable to re-arrange this collection of materials into periods of five years each, to calculate the *annual* average Revenue during each period, and also the Ratio of each branch to the total Revenue raised. By this means a connected and condensed review of the whole progress of the Revenue, during twelve quinquennial periods, and one period of four years, down to the date of the latest accounts, can be seen in the columns of the following TABLES K and L. These are arranged in chronological order, and the latter of the two, viz, TABLE L, contains a synopsis of the average *annual* revenue derived from all sources, with the per-centages of each branch (1) in the period of four years just referred to; (2) in the preceding period of sixty years; and (3) in the aggregate whole period of sixty-four years.

Following these Tables is another Table (M), giving a summary of the aggregate total amounts of the separate branches of revenue during the whole period. This Table also explains, in the column headed "Remarks," the reasons for some Items of revenue appearing in certain periods and not in others, or in other words, the dates of the introduction or repeal of those items of revenue or taxation in different parts of India.

The construction of these three Tables, K, L, and M, has demanded considerable labour; but, it is submitted, this can scarcely be said to have been uselessly expended, as the Tables give such a condensed view of the many details of the Indian Revenue during a prolonged period of time, as is not elsewhere obtainable.

In the first part of the present paper it will have been noticed that the Items of revenue are given for the five governments of India separately. To have preserved this separation in the figures which here follow, would have extended the statement to an inconvenient length, and rendered it less clear; besides which, it is not possible to arrive at a definite statistical view of the exact rate of increase of the territorial limits, and of the population, of the several divisions of India, during past periods of annexation and rapid growth.

It is, perhaps, necessary to repeat, that throughout the tables three 0's (000) are omitted at the unit end of each amount of revenue. Thus, in the second column of the immediately following TABLE K, the Land Revenue for India in the five years 1792-3 to

1796-7, is expressed as having averaged 4,068 Millions Sterling. This must be read 4,068,000*l.*; and 0.264 as the Opium Revenue given in the next line but one, must be read 264,000*l.*

TABLE K.

AVERAGE ANNUAL REVENUE derived from all Sources, with PER CENTAGE PROPORTIONS of the Total of each Branch, as raised in the WHOLE of INDIA in TWELVE SEPARATE PERIODS OF FIVE YEARS EACH during the Sixty Years 1792-1852.

	1	2	3	4	5	6	7
	Five Years, 1792-3 to 1796-7.		Five Years, 1797-8 to 1801-2.		Five Years, 1802-3 to 1806-7.		
Branches of Revenue.	Average Annual Revenue.	Ratio of each Branch to Total Revenue.	Average Annual Revenue.	Ratio of each Branch to Total Revenue.	Average Annual Revenue.	Ratio of each Branch to Total Revenue.	
	Mins. £	Per Cent.	Mins. £	Per Cent.	Mins. £	Per Cent.	
1. Land	4.068	50.33	4.126	42.02	4.582	31.99	
2. Salt	1.207	14.93	1.188	12.10	1.589	11.09	
6. Opium	0.264	3.27	0.312	3.18	0.579	4.04	
7. Post Office	0.028	.35	0.042	.43	0.048	.34	
8. Stamps .....	....	....	0.030	.30	0.062	.43	
9. Customs	0.192	2.38	0.304	3.10	0.596	4.16	
10. Mint	0.008	.10	0.008	.08	0.012	.08	
12. Miscellaneous	2.315	28.64	3.809	38.79	6.857	47.87	
Total Avg. Revenue	8.082	100.	9.819	100.	14.325	100.	
Total Avg. Charges	6.900	85.4	10.197	103.8	15.554	108.6	
Average Indian Surplus	1.182	....	....	....	....	....
Average Indian Defi- ciency .....	....	....	.378	....	1.229	....

TABLE K.—Continued.

1	2	3	4	5	6	7
Branches of Revenue.	Five Years, 1807-8 to 1811-12.		Five Years, 1812-13 to 1816-17.		Five Years, 1817-18 to 1821-2.	
	Average Annual Revenue.	Ratio of each Branch to Total Revenue.	Average Annual Revenue.	Ratio of each Branch to Total Revenue.	Average Annual Revenue.	Ratio of each Branch to Total Revenue.
	Mins. £	Per Cent.	Mins. £	Per Cent.	Mins. £	Per Cent.
1. Land	5·078	31·68	9·018	52·33	13·263	66·17
5. Salt	1·785	11·14	1·882	10·92	2·256	11·25
6. Opium	0·767	4·79	0·958	5·56	1·090	5·44
7. Post Office	0·058	·36	0·071	·42	0·085	·42
8. Stamps	0·067	·42	0·122	·72	0·234	1·17
9. Customs	0·807	5·04	1·159	6·68	1·667	8·32
10. Mint	0·013	·08	0·035	·21	0·057	·29
12. Miscellaneous.....	7·452	46·49	3·990	23·16	1·392	6·94
Total Avg. Revenue	16·027	100°	17·235	100°	20·044	100°
Total Avg. Charges	14·782	92·4	15·490	89·9	19·609	97·8
Average Indian Surplus	1·245	....	1·745	....	·435	....

	Five Years, 1822-3 to 1826-7.		Five Years, 1827-8 to 1831-2.		Five Years, 1832-3 to 1836-7.	
1. Land	13·567	61·83	13·112	60·90	11·942	57·00
2. Sayer .....	....	....	....	....	0·149	·73
3. Excise.....	....	....	....	....	0·004	·02
4. Moturpha .....	....	....	....	....	0·019	·09
5. Salt.....	2·603	11·87	2·590	12·03	2·036	9·72
6. Opium	1·641	7·47	1·747	8·12	1·677	8·00
7. Post Office	0·118	·54	0·124	·58	0·120	·57
8. Stamps	0·329	1·50	0·381	1·77	0·356	1·70
9. Customs.....	1·663	7·58	1·747	8·12	1·506	7·19
10. Mint	0·035	·16	0·037	·17	0·066	·31
11. Tobacco .....	....	....	....	....	0·015	·07
12. Miscellaneous.....	1·986	9·05	1·789	8·31	3·059	14·60
Total Avg. Revenue	21·942	100°	21·527	100°	20·949	100°
Total Avg. Charges	22·184	101·1	20·724	96·3	16·896	80·7
Average Indian Surplus	....	....	·803	....	4·053	....
Average Indian De- ficiency.....	·242	....	....	....	....	....

TABLE K.—Continued.

1 Branches of Revenue.	2 Five Years, 1837-8 to 1841-2.		3 Five Years, 1842-3 to 1846-7.		4 Five Years, 1847-8 to 1851-2.	
	Average Annual Revenue.	Ratio of each Branch to Total Revenue.	Average Annual Revenue.	Ratio of each Branch to Total Revenue.	Average Annual Revenue.	Ratio of each Branch to Total Revenue.
	Mins. £	Per Cent.	Mins. £	Per Cent.	Mins. £	Per Cent.
1. Land	12'380	59'05	13'432	55'85	14'947	56'06
2. Sayer	0'725	3'46	0'824	3'43	1'038	3'89
3. Excise.....	0'023	'11	0'028	'12	0'028	'10
4. Moturpha	0'103	'49	0'112	'47	0'116	'43
5. Salt.....	2'593	12'37	2'798	11'65	2'438	9'14
6. Opium	1'547	7'38	2'965	12'33	3'840	14'50
7. Post Office	0'146	'70	0'180	'75	0'189	'70
8. Stamps	0'424	2'02	0'441	1'83	0'470	1'75
9. Customs	1'418	6'76	1'449	6'02	1'439	5'40
10. Mint	0'090	'43	0'092	'38	0'086	'31
11. Tobacco	0'081	'39	0'089	'37	0'088	'32
12. Miscellaneous.....	1'434	6'84	1'636	6'80	1'977	7'40
Total Avg. Revenue	20'964	100'	24'046	100'	26'656	100'
Total Avg. Charges	19'301	92'1	22'338	92'9	24'113	90'5
Average Indian Surplus	1'663	....	1'708	....	2'543	....
Average Indian De- ficiency.....)	....	....	....	....	....	....

TABLE L.

Summary of preceding Table (K), AVERAGE ANNUAL REVENUE derived from all Sources, with PER CENTAGE PROPORTIONS of the Total of each Branch, as raised in the WHOLE of INDIA:—(1) In the Period of FOUR YEARS 1852-3 to 1855-6; (2) In the preceding Period of SIXTY YEARS 1792-3 to 1851-2; (3) In the Aggregate Period of SIXTY-FOUR YEARS 1792-3—1855-6.

	1	2	3	4	5	6	7
	Four Years, 1852-3 to 1855-6.		Sixty Years, 1792-3 to 1851-2.		Sixty-Four Years, 1792-3 to 1855-6.		
Branches of Revenue.	Average Annual Revenue.	Ratio of each Branch to Total Revenue.	Average Annual Revenue.	Ratio of each Branch to Total Revenue.	Average Annual Revenue.	Ratio of each Branch to Total Revenue.	
	Mins. £	Per Cent.	Mins. £	Per Cent.	Mins. £	Per Cent.	
1. Land	16'183	55'40	9'959	53'93	10'349	54'07	
2. Sayer	1'182	4'05	0'083	'45	0'152	'80	
3. Excise.....	0'037	'13	0'081	'44	0'078	'41	
4. Moturpha	0'112	'38	0'100	'54	0'101	'53	
5. Salt.....	2'677	9'17	2'080	11'26	2'118	11'07	
6. Opium	4'943	16'91	1'449	7'85	1'667	8'71	
7. Post Office	0'211	'73	0'101	'55	0'108	'56	
8. Stamps	0'529	1'81	0'243	1'32	0'261	1'36	
9. Customs	1'611	5'52	1'162	6'29	1'190	6'22	
10. Mint	0'131	'45	0'045	'24	0'050	'26	
11. Tobacco	0'018	'06	0'023	'12	0'022	'11	
12. Miscellaneous.....	1'575	5'39	3'142	17'01	3'043	15'90	
<i>Total Average Revenue</i>	29'209	100'00	18'468	100'00	19'139	100'00	
<i>Total Average Charges</i>	27'093	92'75	17'341	93'89	17'950	93'78	
<i>Average Indian Surplus</i>	2'116	....	1'127	....	1'189	....
<i>Average Indian Defi- ciency .....</i>	....	....	....	....	....	....

It should be distinctly observed, that according to the definition of the previous returns, the Surplus or Deficient Revenue in each year is the Indian Surplus or Deficiency, and is altogether irrespective of the amount of Home Charges. This is explained in the last four lines of the following explanatory statement, TABLE M. In this are given, approximately the items which, upon an aggregate receipt of

1,224,917,000*l.* in Sixty-four Years, left, after deducting Indian Charges of 1,148,812,000*l.*, an Indian Surplus of 76,105,000*l.*

This Indian Surplus or Credit has to be Debited (1) with Home Charges during the Sixty-four Years; (2) with the amount of Debt existing at the beginning of the period, and (3) with the augmentations of the Debt between 1792 and 1856. These, together 130,504,000*l.*, reduced the Indian Surplus to an aggregate Deficiency at 30th April, 1856, of 54,399,000*l.* nearly, being the collective amount of the then Indian Debt of 50,483,369*l.*, and of 3,915,317*l.* Home Bond Debt charged on the Revenues of India, as explained at greater length in the TABLE F of the second part of this paper. And in order to bring these figures down to the most recent date, it is only necessary to repeat, that, including the Loan of the present year (1858), the Home Bond Debt does not now exceed 12,000,000*l.*, so that the aggregate Indian Debt charged on the Revenues of India, is at this date (April, 1858) about 64,000,000*l.*

TABLE M.

SUMMARY of the Aggregate Amounts of the Branches of REVENUE of INDIA for the SIXTY-FOUR YEARS 1792-93 to 1855-56, as per Tables K and L.

1 Branches of Revenue.	2 Amount of Revenue raised.	3 Period.		5 REMARKS.
		4 Number of Years.	4 Dates.	
	Mlns. £			
1. Land.....	662'308	64	1792-3 to 1855-6	This Item of Revenue appears in Bengal, Madras, and Bombay Accounts throughout the period. In North-Western Provinces Accounts from 1834-5. In Punjab Accounts from 1849-50.
2. Sayer & Abkarry	9'729	20	1836-7 to 1855-6	In accounts of Bengal, North-Western Provinces, Madras, and Bombay from 1836-7. Punjab from 1849-50.
3. Excise	4'987	20	„ „	In Bengal Accounts exclusively.
4. Moturpha.....	6'455	20	„ „	In Madras Accounts exclusively.
5. Salt	135'532	64	1792-3 to 1855-6	In Bengal Accounts exclusively from 1792-3 to 1812-13. Bengal and Madras, 1813-14 to 1822-3. Bengal, Madras, and Bombay, 1823-4 to 1838-9. North-Western Provinces, in addition to the three last-mentioned, 1839-40 to 1855-6. Punjab, Nil.

TABLE M.—Continued.

1 Branches of Revenue.	2 Amount of Revenue raised.	3 Period.		5 REMARKS.
		Number of Years.	Dates.	
	Mlns. £			
6. Opium	106·707	64	1792-3 to 1855-6	In Bengal Accounts exclusively, 1792-3 to 1819-20. Ben- gal and Bombay exclusively, 1820-21 to 1855-56.
7. Post Office	6·888	64	" "	Bengal and Madras, 1792-3 to 1855-6. Bombay, 1813-14 to 1855-6. North-Western Provinces 1835-6 to 1855-6. Punjab, 1849-50 to 1855-6.
8. Stamp Duties	16·697	59	1797-8 to 1855-6	Bengal from 1797-8. Madras from 1813-14. Bombay from 1819-20. North-Western Provinces from 1834-35. Punjab from 1849-50.
9. Customs	76·179	64	1792-3 to 1855-6	Bengal, Madras, and Bombay from 1792-3. North-Western Provinces from 1834-5. Pun- jab in 1849-50, and abolished there from 1 Jan., 1850.
10. Mint Dues	3·221	64	" "	Bengal from 1792-3. Madras and Bombay from 1813-14. North-Western Provinces and Punjab, Nil.
11. Tobacco	1·437	18	1836-7 to 1853-4	Madras exclusively from 1836-7 to 1853-4. Then abolished.
12. Miscellaneous	194·777	64	1792-3 to 1855-6	Same dates as those of Item 1.
Total Revenue.....	1224·917	"	" "	
Ded. Indian Charges	1148·812	"	" "	
Leaves Indian Surplus	76·105	....	....	Calculating the Rupee at 2s.
Debit Home Charges, Debt existing in 1792, and increase of Debt from 1792-3 to 1855-6....	130·504			
Leaves Debt charged on India at 30th April, 1856.....	54·399	(inclusive of Home Bond Debt charged upon the revenues of India. See TABLE F, <i>ante</i> .)		

As this paper has already extended to a greater length than was at first contemplated in its preparation, the following notes on

the several Items of Revenue have been shortened as much as possible.

It will be convenient to refer to each branch of Revenue separately.

(1). **LAND-TAX.**—So much has already been said respecting this most important source of Revenue, that nothing further need here be repeated beyond the abstracting, from the TABLES K and L, of the figures showing its progress from 1792 to 1856, taking the whole of British India together.

Land Tax.—Whole of India.

Period.	Dates.	Land-Tax. Average Annual Revenue.	Ratio of Land-Tax to Total Revenue from all Sources.
		£	Per Cent.
5 Years	1792- 3 to 1796- 7	4,068,000	50'33
" "	1797- 8 „ 1801- 2	4,126,000	42'02
" "	1802- 3 „ 1806- 7	4,582,000	31'99
" "	1807- 8 „ 1811-12	5,078,000	31'68
" "	1812-13 „ 1816-17	9,018,000	52'33
" "	1817-18 „ 1821- 2	13,263,000	66'17
" "	1822- 3 „ 1826- 7	13,567,000	61'83
" "	1827- 8 „ 1831- 2	13,112,000	60'90
" "	1832- 3 „ 1836- 7	11,942,000	57'00
" "	1837- 8 „ 1841- 2	12,380,000	59'05
" "	1842- 3 „ 1846- 7	13,432,000	55'85
" "	1847- 8 „ 1851- 2	14,947,000	56'06
4 „	1852- 3 „ 1855- 6	16,183,000	55'40
60 „	1792-93 „ 1851-52	9,959,000	53'93
64 „	1792-93 „ 1855-56	10,349,000	54'07

This abstract shows, that notwithstanding the reduction of the Assessment, and the greater ease to the people of India which has ensued from their Rents being lowered, the importance of the Land-Tax as a branch of Revenue has increased.

Whilst the figures of the average annual Assessment in each of the several thirteen periods embraced in the above extract are in themselves of use in tracing the progress of the Tax, from the average annual amount of 4,068,000*l.* (which it contributed to the Revenue in each of the 5 years 1792-3 to 1796-7), up to the average annual amount of 16,183,000*l.* (which it contributed to the Revenue in each of the 4 years 1852-3 to 1855-6), any minute analysis of the per centage increase from one period to another has not been gone into, as the territorial area and extent of population during the separate periods is extremely difficult of ascertainment, and of course is only possible by a very rough approximation. All that can be accomplished on this occasion is to present, in a tolerably complete form, one of the set of elements essential to such an enquiry.

On another, and interesting topic of investigation, viz.: the proportion of the total Revenue raised from Land-Tax, and from each separate other branch of Revenue, the preceding TABLES L and M, admit of a condensed and full view being formed. The abstract just given, as regards Land-Tax, will show that whilst, at the early periods—(take for example the first four periods from 1792 to 1812)—its proportion of the whole Revenue did not average more than from about $50\frac{1}{3}$ to $31\frac{2}{3}$ per cent.; in the latter periods (taking the last four, from 1837 to 1856), averaged as much as from 59 to $55\frac{2}{3}$ per cent.

As inspection of the tables will readily serve to place in juxtaposition similar comparisons of the ratios of the other branches of Revenue, the few notes which space will allow as respects them will be restricted to more general remarks.

(2). **SAYER REVENUE.***—Under this head are included *Abkarry*, i.e., Waters (Strong Waters), or Spirit Vendor's licenses, and various other miscellaneous branches of Revenue included in the term "Sayer" which appears to have been given separately in the accounts during the last twenty years only. This branch of Revenue, chiefly direct in form, but from the nature of its incidence, indirect in its action on the taxed community; has increased from an average of about 149,000*l.* per annum between 1832 and 1837, to an average of 1,182,000*l.* per annum between 1852 and 1856.

(3). **EXCISE.**—The date of first appearance of this item separately in the accounts corresponds with the preceding. Its annual average has varied from the sum of 4,000*l.* only in 1836-37, up to 37,000*l.* only between 1852 and 1856. We may repeat it only appears in the Bengal accounts.

(4). **MOTURPHA.**—This Item has never been included as a separate head of revenue in any other than the Madras accounts, and the average receipts from it have varied from 19,000*l.* per annum in 1836-7, to 112,000*l.* per annum in the four years 1852-56.

The Moturpha is of very ancient origin; in fact, coeval with the earliest authentic Hindoo records. It was a species of Income and Property Tax on Profits and on Personal Property and Stock-in-Trade. It was levied upon merchants, manufacturers, weavers, shop-keepers, &c., and upon their trade profits, houses, labour and tools. It may, probably, have been carried to too excessive a minuteness of incidence, so as to render doubtful the pecuniary advantage of its collection. This is, however, only a rectifiable condition common to the

* The word *Sayer* appears to receive somewhat different etymological definitions in various authorities; but, in the end, they all amount to concurring that it means miscellaneous taxes not included in the great taxes. But this designation is a little inconvenient, as there are some specific sources of Revenue of larger amount than the Sayer Revenue, under the head of "Miscellaneous," afterwards described, being the number (12) of these Tables and notes.

doctrine of limits as applicable to fiscal science. It cannot be maintained that, in principle, this tax was unsound. A property and income tax is based upon the broad and general foundation, that the relative wealth, in accumulated and productive property, of the various classes of any community, is the most perfect of available standards for practically keeping up a sufficiently near approach to the proportionality of taxation. It is further justifiable upon the special ground, that by the plan adopted in all great countries where such a tax is in force, a limit is defined of mediocrity of means, or of comparative poverty, which entitles a majority of the people, and the whole of the poorer classes to an exemption from its burden. By this means a virtual contribution from the richer minority in aid of their poorer fellow-subjects,—a voluntary concession of the most equitable and useful nature—is always preserved.

The following is the Clause of the laws of Menu under which the ancient Property and Income Tax was levied upon the Hindoos:—

“The Tax on the mercantile class, which in times of prosperity must be only a twelfth part of their crops, and a fiftieth part of their personal profits, may be an eighth of their crops in a time of distress, or a sixth, which is the medium, or even a fourth in great public adversity; but a twentieth of their gains on money, and other moveables, is the highest tax. Serving-men, artizans, and mechanics, must assist by their labour, but at no time pay taxes.”—(*Sir W. Jones. Translation of Clause 120, Chap. X, of the Ordinances of Menu, according to the Gloss of Callúca.*)

This tax, the *Moturpha*, has, it is said, recently (that is, within the last year or two,) been entirely repealed in Madras. We may, therefore, expect not to see its recurrence in the accounts of 1857-8 and future years. It must be assumed that sufficient and weighty reasons for its repeal were apparent to the Government of Madras. But it is a fair open question, whether upon an adequate review of the antecedents of systems of taxation in India, an Income and Property Tax, taking due care that the comparatively poor should be exempted altogether, might not with very great advantage be restored throughout the whole of India.

Take, for instance, the case of a wealthy *Zumeendar* in Bengal. He has, we will say, an Income of 3,000*l.* a-year, derivable, in the proportions of 1,000*l.*, or one-third, from the produce of the land cultivated by his tenants; 1,000*l.* or another third, from capital invested in the territorial debt of India; and of 1,000*l.*, or the remaining third, from interest on capital lent by him on mortgage of real property, or on guaranteed East India Railway Stock. What is his position as a tax payer? First, as to his income from Land. We have the authority of the official statements from the East India House, for asserting that the Land-Tax in the Lower Provinces of Bengal, under the Permanent settlement, is on the average about half the amount at which a natural and just amount of rent would be fixed. The Landholder is therefore, as regards the source of this

part of his income, in the same pecuniary position (from an English point of view), as a person having half his property freehold, and the other half on perpetual lease at a rental corresponding to the present natural price or hire of the soil. The Zumeendar is, thus far, exempt from any taxation at all, and he has no Poor Rates nor Tithes to pay.

It may, perhaps, be necessary to notice, in order to show that, in this hypothetical statement, the particulars of his position as to Rent of Land have not been exaggerated, that we might have supposed the whole of the real property from which this '1,000*l.* per annum is derived, to be exempt from any Land-Tax. For it is well known that large tracts of land in India do not pay one farthing of revenue to the government, as the acts of all previous rulers have been respected and confirmed in their grants of land as *Enams*, or gifts, *Maaffees* and *Lakhurauj*, or lands exempted from revenues, Jagheers or lands held on military or feudal tenure.

Next, as to the second item of his income, viz. : 1,000*l.* from Interest on the territorial debt of India; and as to the remaining third item of 1,000*l.* income from interest on loans and railway shares it need scarcely be observed that, with the exception of some trifling deed stamps on the Mortgages and transfers, the Revenue of India takes no part of this Income.

If he smokes Tobacco, the government receive no tax. If he has a hundred servants, no assessment is made upon him. His carriages and horses are free from any impost.

What then does he contribute, in the shape of direct and indirect taxation, to the Revenue? The answer is, that (1) upon the Salt consumed in his house, he contributes to the amount of a few shillings in the year;—(2), that if he indulges in drinking spirituous liquors, the shopkeeper who has to pay for a spirit license or monopoly, charges him a somewhat increased price, so as to make the tax fall upon him as a consumer.—And these make up the sum total of his contributions, and instead of some stimulus to exertion being imposed upon him by the government placing a moderately increased burden of taxation at his charge, he is left scot-free; and the better off he is, the more does he consume of the untaxed commodities of the country, and the less does he contribute in proportion to his share in its industrial progress, and in its general wealth and resources.

If this be not a disturbance of the equity and proportionality of taxation, we shall have difficulty in discovering what is so. And, if it be such a disturbance, the proposition is established that direct taxation is too much neglected in India.

(5). SALT-TAX.—This is the only tax universally felt throughout India. There has been much controversy at all times respecting it, and of too complex and lengthy a character to admit of any discussion here. The difficulties attendant on a clear comprehension of its

effect on the consumption and price of Salt, have, however, been much lessened by the recent inquiry instituted by the government of India.

It is not long since an elaborate Report on the Manufacture and Sale of Salt, and on the Tax thereon in British India, was laid before Parliament. This Report, dated Nagpore, 24th May, 1856, is from Mr. George Plowden, Commissioner of Inquiry on Salt. It professes to embrace the whole subject of the supply of Salt for every part of British India, and to be fitted for a complete text book of reference. The contents, including appendices, take up more than a thousand folio pages.

The following are some of the most important of Mr. Plowden's conclusions (see page 218 of Report):—

“The Salt Tax is the only tax, direct or indirect, of any description, which labourers, and other poor people, in India, are *obliged* to pay.

“The argument that Salt is the only condiment an Indian labourer consumes with his food, which is of such a nature that without Salt it would be intolerably insipid, is a mistake of fact.

“The Indian labourer, when the facts of his case are ascertained, is proved to be much more fortunate in the fiscal system under which he lives, than the English labourer.

“The whole of the evidence on both sides of the question of monopoly goes to this, that it is impossible to point out any equally productive source of revenue, in India, less objectionable, all things considered, than a moderate Salt Tax.

“The Salt Tax, even at its present high rate in Bengal, is not, all things considered, ‘a heavy and grievous burthen’ to the labouring man, or to any one else living under the protection of the British Government.

“At the same time, the tax is positively too high, even at its present reduced rate, and apart from financial considerations, it is very desirable that further reductions should be made.

“If any reduction be made, it should be a reduction of eight annas per maund at one leap.”

The space at command absolutely forbids our entering upon any review of the Statistics contained in Mr. Plowden's very important and voluminous report. A few words are, however, desirable, and upon the conclusions above cited, particularly as to the last two paragraphs upon certain suggested further reductions in the tax. These read as if some explanation were needed to reconcile them with the other conclusions which precede them. Without such explanation, the meaning of the Commissioner would seem to be the advocacy of reduction simply on the general ground (common to most kinds of taxation) that in the hypothetical event of the finances admitting of reduction without detriment to the requirements of the revenue, that course ought to be adopted.

As the progress and proportions of this Tax to the total Revenue of India at different periods can be easily and conveniently stated, from the tables illustrating this part of our inquiry, I here annex them.

Salt Tax.—Whole of India.

Period.	Dates.	Salt-Tax. Average Annual Revenue.	Ratio to Total Revenue from all Sources.
		£	Per Cent.
5 Years	1792- 3 to 1796- 7	1,207,000	14'93
"	1797- 8 „ 1801- 2	1,188,000	12'10
"	1802- 3 „ 1806- 7	1,589,000	11'09
"	1807- 8 „ 1811-12	1,785,000	11'14
"	1812-13 „ 1816-17	1,882,000	10'92
"	1817-18 „ 1821- 2	2,256,000	11'25
"	1822- 3 „ 1826- 7	2,603,000	11'87
"	1827- 8 „ 1831- 2	2,590,000	12'03
"	1832- 3 „ 1836- 7	2,036,000	9'72
"	1837- 8 „ 1841- 2	2,593,000	12'37
"	1842- 3 „ 1846- 7	2,798,000	11'65
"	1847- 8 „ 1851- 2	2,438,000	9'14
4 "	1852- 3 „ 1855- 6	2,677,000	9'17
60 "	1792- 3 „ 1851- 2	2,080,000	11'26
64 "	1792- 3 „ 1855- 6	2,118,000	11'07

It is satisfactory to observe from these figures that the Salt Tax, in its ratio to the total raised from other branches of Revenue, has been gradually decreasing.

(6). OPIUM REVENUE.—The progress of this branch of the Revenue of India is shown in the annexed figures:—

Opium Revenue.—Whole of India.

Period.	Dates.	Opium. Average Annual Revenue.	Ratio to Total Revenue from all Sources.
		£	Per Cent.
5 Years	1792- 3 to 1796- 7	264,000	3'27
"	1797- 8 „ 1801- 2	312,000	3'18
"	1802- 3 „ 1806- 7	579,000	4'04
"	1807- 8 „ 1811-12	767,000	4'79
"	1812-13 „ 1816-17	958,000	5'56
"	1817-18 „ 1821- 2	1,090,000	5'44
"	1822- 3 „ 1826- 7	1,641,000	7'47
"	1827- 8 „ 1831- 2	1,747,000	8'12
"	1832- 3 „ 1836- 7	1,677,000	8'00
"	1837- 8 „ 1841- 2	1,547,000	7'38
"	1842- 3 „ 1846- 7	2,965,000	12'33
"	1847- 8 „ 1851- 2	3,840,000	14'50
4 "	1852- 3 „ 1855- 6	4,943,000	16'91
60 "	1792-93 „ 1851-52	1,449,000	7'85
64 "	1792-93 „ 1855-56	1,667,000	8'71

It is thus evident that the proportionate importance of the government opium monopoly, as contrasted with the aggregate of other sources of revenue, has increased fivefold in the 64 years, ending in 1856.

No item of Indian Revenue has been so much inveighed against, by foreign as well as by home opponents of the policy of Great Britain in the East, as the Opium revenue.

It is contended that it is iniquitous to derive a revenue from the sale of a drug prejudicial to the health, and to the physical and moral condition of the Chinese who use it and pay the whole of the tax; but it is a matter of fact that, notwithstanding Imperial edicts and prohibitions, opium is largely cultivated in several parts of China, and the native produce is generally supposed to be nearly equal to the amount of Indian Opium imported. It is as erroneous to assert that England is amenable to the charge of forcing this narcotic upon the two or three millions of Chinese opium smokers, whose indulgence is supplied by the opium grown in India, as it would be to assert that France is amenable to the charge of fostering brandy drinking in the countries which import the produce of Cognac. If India were the only country in which opium could be grown, or if France were the only country in which brandy could be distilled, there might be some foundation for each of these inductions; but as the contrary to these propositions is the truth, such inductions are fallacious.

The good side of the opium trade, and the important ends it subserves, are too often quite overlooked by anti-English writers of the "Veuillot de l'Univers" type.

In the first place, the growth of opium in India gives employment and means of subsistence to thousands of persons; native capital and labour are profitably employed in the transit of the product on land and sea; and European manufactured goods are made cheaper in price, and more within the purchasing power of our Indian fellow-subjects. In the next place, there are the benefits which accrue to China through the great help to commerce afforded by the import into China of Indian opium; and besides this, the Chinese are able to devote to cultivation of necessities of life, that portion of the soil which would be appropriated to the growth of opium, if it were not for their preference of the Indian-grown article.

The commercial advantages require more detailed explanation. We are now exporting from the United Kingdom to the East Indies at the rate of about 13,000,000*l.* per annum of Home Produce. We indulge in the luxury of Chinese tea, and import Chinese silk for home and foreign consumption, at the rate of (together) about 14,500,000*l.* per annum. The Chinese have not yet arrived at a larger development of taste for British manufactured goods than suffices to induce them to import about 2,500,000*l.* per annum. We

have, therefore, to pay them the difference between 14,500,000*l.*, due to them for tea and silk chiefly, and 2,500,000*l.*, due by them for our manufactured goods. We should, therefore, in the present state of the trade, have to remit them 12,000,000*l.* in bullion, were it not that the Celestial Empire has its own wants in the shape of opium, and of raw produce of other kinds indigenous to India.

But India is not a Chinese-tea-drinking, nor Chinese-silk-wearing, country, China, therefore, has to pay India in bullion. At the present rate of the opium trade it would have to pay in this manner more than 7,000,000*l.* per annum. The United Kingdom exports, as stated, about 13,000,000*l.* of declared annual value to India. On the other hand it has certain balances in its favour due by India, including the sums due by the territorial revenues to cover the charges of the Indian government defrayed in England. To meet these, India would have to remit bullion to England, if it were not for the opium trade.

Through the useful medium of this trade, the 7,000,000*l.* described as due from China to India, for Opium, is balanced by the 7,000,000*l.* due from India to England. Instead of the costly, circuitous, and hazardous process of China sending 7,000,000*l.* of her bullion to India; India sending 7,000,000*l.* of her bullion to England; and England sending 7,000,000*l.* of her bullion to China; these three objects are all realized by China taking 7,000,000*l.* worth of Opium from India; and thus (1) lightening the Revenue of British India to the extent of about 4,000,000*l.* per annum, which is the net receipt from opium; and, (2), economizing the use of an aggregate of Twenty-One Millions of bullion, a benefit felt to nearly an equal extent by the three nations concerned; viz., India, China, and the United Kingdom.

(7). **POST OFFICE.**—The figures of the gross Revenue from this source may be seen on inspection of the TABLES K and L. From the Year 1839 to the present time, after the expenses are deducted, a Net deficit has resulted. It requires no more than this to be said, to prove that the Post Office is no burthen on the people of India, even if it were not notorious that the British government following out the successful home plan of penny postage, have extended the benefits of a proportionately lower rate of postage to India.

(8). **STAMP DUTIES.**—It is not essential to recapitulate the items of Revenue from this source, save to remark that they have increased in the annual aggregate from 30,000*l.*, in the period 1797-1802, to 529,000*l.* in the period 1852-56.

(9). **CUSTOMS.**—These are raised from certain descriptions of goods passing the frontiers between British India and the Native States, and by Import and Export Duties. All vexatious municipal

customs-duties or tollage, have long ago been abolished. The Customs Receipts have not increased as much as might be expected with the growth of Indian commerce. Whether this has arisen from desirable reductions of duty, or chiefly from a laudable wish to promote the cultivation and export of certain descriptions of raw produce, it is not within the scope of these remarks to enter. The following are the figures showing the progress and retrogression of the gross revenue from this branch:—

Customs Revenue.—Whole of India.

Period.	Dates.	Customs. Average Annual Revenue.	Ratio to Total Revenue from all Sources.
		£	Per Cent.
5 Years	1792- 3 to 1796- 7	192,000	2'38
"	1797- 8 „ 1801- 2	304,000	3'10
"	1802- 3 „ 1806- 7	596,000	4'16
"	1807- 8 „ 1811-12	807,000	5'04
"	1812-13 „ 1816-17	1,159,000	6'68
"	1817-18 „ 1821-22	1,667,000	8'32
"	1822- 3 „ 1826- 7	1,663,000	7'58
"	1827- 8 „ 1831- 2	1,747,000	8'12
"	1832- 3 „ 1836- 7	1,506,000	7'19
"	1837- 8 „ 1841- 2	1,418,000	6'76
"	1842- 3 „ 1846- 7	1,449,000	6'02
"	1847- 8 „ 1851- 2	1,439,000	5'40
4 „	1852- 3 „ 1855- 6	1,611,000	5'52
60 „	1792- 3 „ 1851- 2	1,162,000	6'29
64 „	1792- 3 „ 1855- 6	1,190,000	6'22

(10). MINT DUTIES.—This, like the Post Office Revenue, is sometimes an item of net deficit. In many years, however, the Receipts, after deducting all charges, have left a handsome contribution to Revenue. The item is not of sufficient moment to require recapitulation here of all the figures which belong to it, in TABLES K and L. We may restrict ourselves to noticing that the gross Mint Dues have increased from an average of 8,000*l.* in the period 1792-1797, to an average of 131,000*l.* per annum in the period 1852-56.

(11). TOBACCO.—The Revenue from Tobacco only existed for eighteen years between 1836-7 to 1853-4, when it was abolished. It does not appear to have been applied to any part of India except the Madras Presidency. The whole gross Sum raised in the 18 years was 1,437,000*l.* The annual amount varied from 76,000*l.* in the first year of the period, to 63,000*l.* in 1852-3. The figures for the year of its abolition appear in the accounts of the year 1853-4 at

about 9,000%. only, but it may fairly be assumed that this was only a balance settlement, or for a fractional period of the year prior to the entire cessation of this source of revenue.

If the use of tobacco were likely to prevail extensively in India, it would be difficult to point out any valid objection to the reimposition of a tax upon an article which, by the consent of the leading countries of the world, is one of the fittest of any for taxation.

(12). MISCELLANEOUS.—This is the last Item of Revenue. It comprises annual Tributes paid by native princes under treaty or otherwise, subsidies from similar sources; and certain miscellaneous items (of revenue rather than of taxation) such as pilotage and other charges of the marine and Dock departments; interest on arrears of revenue; judicial receipts; sales of presents from native princes; &c., &c. The amount of tribute and subsidy from native princes have amounted at various periods to such different sums, that it is obvious much fluctuation has ensued in the amount and proportions to total revenue of this particular and special branch. It is desirable to recapitulate the figures.

Miscellaneous Revenue.—Whole of India.

Period.	Dates.	Miscellaneous Revenue. Annual Average.	Ratio to Total Revenue from all Sources.
		£	Per Cent.
5 Years	1792- 3 to 1796- 7	2,315,000	28·64
"	1797- 8 „ 1801- 2	3,809,000	38·79
"	1802- 3 „ 1806- 7	6,857,000	47·87
"	1807- 8 „ 1811-12	7,452,000	46·49
"	1812-13 „ 1816-17	3,990,000	23·16
"	1817-18 „ 1821- 2	1,392,000	6·94
"	1822- 3 „ 1826- 7	1,986,000	9·05
"	1827- 8 „ 1831- 2	1,789,000	8·31
"	1832- 3 „ 1836- 7	3,059,000	14·60
"	1837- 8 „ 1841- 2	1,434,000	6·84
"	1842- 3 „ 1846- 7	1,636,000	6·80
"	1847- 8 „ 1851- 2	1,977,000	7·40
4 „	1852- 3 „ 1855- 6	1,575,000	5·39
60 „	1792- 3 „ 1851- 2	3,142,000	17·01
64 „	1792- 3 „ 1855 -6	3,043,000	15·90

It is satisfactory to observe that the Revenue is less dependent than it used to be upon fluctuations in this source of income. Whilst on the one side the British government receive Tributes and Subsidies from native states, on the other side it makes allowances to native states.

The following represents, approximately, the balance between
VOL. XXI. PART III.

payments and receipts of this nature in the year ended 30th April, 1856:—

Receipts.

	£
Tributes from various States (<i>Bengal</i>)	101,000
„ Peshcush and Subsidies (<i>Madras</i>)	323,000
„ and Subsidies (<i>Bombay</i>)	75,000
Total	499,000

Payments.

Stipends, Pensions, Charitable and other Allowances, and Assignments paid out of the Revenues in accordance with Treaties or other engagements—

<i>Bengal</i> (including Coorg and Nagpore, the Eastern settle- ments)	£323,000
<i>North-Western Provinces</i> (including allowances to the Ex-Royal Family at Delhi, amounting to 333,192 <i>l.</i> per annum; and payments in the Cis and Trans-Sutlej States)	381,000
<i>Punjab</i> , Pensions, Allowances, &c.	105,000
<i>Madras</i> , „ „	302,000
<i>Bombay</i> , „ „ (including Sind and Sattara)	134,000
Total	1,245,000

Thus, it appears that against the total tribute and subsidies received by the British government from native princes and states, and amounting to about 500,000*l.*, there are payments of pensions and allowances made by the British Government to native princes and states, amounting to about 1,250,000*l.*, leaving a balance against the territorial revenues of British India, of about 750,000*l.* There is ground, however, for believing, that in consequence of the rebellious conduct of the ex-royal family at Delhi, and of other native princes, the net adverse balance upon this Item may now be taken at under 500,000*l.* per annum.

APPENDIX.

TABLE N.

BENGAL COLLECTORATES, AREA, POPULATION, and LAND REVENUE, 1855-56.
(Including Collectorates geographically situate in other Presidencies, but comprised financially in the Bengal Accounts).

Divisions and Districts.	Area. (Approximate.)	Population. 1855-6. (Approximate.)	Land Revenue. 1855-6.
	Sq. Miles.	Millions.	Millions. £
BENGAL PROPER.*			
1. Backergunge	3,794	0·734	0·109
2. Bagoorah	2,160	0·900	0·022
3. Do. Deputy			0·040
4. Burdwan	2,224	1·854	0·311
5. Do. Deputy			0·043
6. Chittagong	2,717	1·000	0·080
7. Cooch Behar (see No. 58) .....	....	....	0·007
8. Dacca	1,960	0·600	0·048
9. Dinagepore	3,820	1·200	0·176
10. Hooghly	2,007	1·521	0·122
11. Jessore	3,512	0·382	0·117
12. Moorshedabad	1,856	1·045	0·129
13. Mymensing	4,712	1·487	0·083
14. Nuddea	2,942	0·299	0·120
15. Purnea	5,712	1·600	0·100
16. Rajshahye	2,084	0·671	0·105
17. Rungpore	4,130	2·559	0·111
18. Do. N. E.			0·002
19. Sylhet	8,424	0·380	0·043
20. Tipperah	4,850	0·807	0·098
21. Twenty-Four Pergunnahs .....	....	....	0·161
22. Beerboom, Deputy	3,114	1·041	0·076
23. Bulloah, Deputy	(incl. in 20)	0·600	0·067
24. Calcutta, Deputy	(do. in 21)	....	0·003
25. Furreedpore	2,052	0·855	0·004
25. Maldah	1,288	0·431	0·027
26. Pubnah	2,006	0·600	0·036
27. Maunbhoom	(see No. 58)	....	0·009
28. Darjeeling	(do.)	....	0·003
	65,964	20·566	2·251

* Under the permanent settlement of 1793.

TABLE N.—Continued.

Divisions and Districts.	Area. (Approximate.)	Population. 1855-6. (Approximate.)	Land Revenue. 1855-6.
	Sq. Miles.	Millions.	Millions. £
BEHAR PROVINCE.			
30. Behar	5,694	2'500	0'154
31. Bhagulpore.....	7,803	2'000	0'059
32. Dhurrumpore	(see No. 58)	....	0'030
33. Patna	1,828	1'200	0'119
34. Sarun	6,394	1'700	0'182
35. Shahabad	4,403	1'600	0'140
36. Tirhoot.....	6,114	2'400	0'166
37. Monghyr, Deputy	3,592	0'800	0'076
38. Hazareebaugh	(see No. 58)	....	0'006
39. Singbhoom	2,944	0'200	0'002
40. Sumbulpore	4,693	0'274	0'010
41. Lohaduggur	(see No. 58)	....	0'005
	43,465	12'674	0'949
ORISSA PROVINCE.			
42. Balasore	1,876	0'556	0'037
43. Cuttack	4,829	1'000	0'083
44. Pooree		{	0'044
45. Hidgelee	5,029		0'038
46. Midnapore	{	0'666	0'142
28(a). Maunbhoom	(see No. 58)	....	0'001
47. Puttaspore	(do.)	....	0'007
	11,734	2'222	0'352
PROVINCES UNDER THE GOVERNOR- GENERAL IN COUNCIL.			
48. Assam	24,531	0'750	0'079
49. Arracan	32,250	0'540	0'071
50. Cachar	4,000	0'060	0'007
51. Tenasserim Provinces	29,168	0'115	0'024
52. Pegu and Martaban do.	32,250	0'570	0'182
53. Coorg Territory (Madras)	2,116	0'136	0'017
54. Nagpore do.	76,432	4'650	0'423
55. Oude do.	25,000	5'000	0'212
56. Eastern Settlements.....	1,575	0'202	0'095
	227,322	12'023	1'110
57. Resumed Lands in Bengal, Behar, } and Orissa	(see No. 58)	....	0'012
58. South-West Frontier and other } Districts, the Area and Popula- } tion of which are not given in the } above list	45,833	4'505	....
Total, Bengal Collectorates	394,318	51'990	4'674

TABLE O.
NORTH-WESTERN PROVINCES, COLLECTORATES, AREA, POPULATION, and
LAND REVENUE, 1855-56.

Divisions and Districts.	Area. (Approximate.)	Population. 1855-6. (Approximate.)	Land Revenue.
	Sq. Miles.	Millions.	Millions. £
DELHI DIVISION.			
1. Bhuttee	3,017	0'113	0'016
2. Delhi	790	0'436	0'046
3. Goorgaon	1,939	0'662	0'107
4. Hissar	3,294	0'331	0'015
5. Paneeput	1,270	0'389	0'082
6. Rhotuck	1,340	0'377	0'063
	11,650	2'308	0'359
MEEHUT DIVISION.			
7. Allyghur	2,152	1'135	0'197
8. Bolundshubur	1,824	0'778	0'107
9. Dhera Dhoon	673	0'032	0'004
10. Meerut	2,200	1'135	0'169
11. Mozuffernuggur	1,616	0'673	0'112
12. Subarnpore	2,162	0'801	0'108
	10,658	4'554	0'697
AGRA DIVISION.			
13. Agra	1,865	1'002	0'161
14. Etawah	1,677	0'611	0'127
15. Furruckabad	2,123	1'065	0'135
16. Muttra	1,613	0'863	0'168
17. Mynpooree	2,020	0'833	0'127
	9,298	4'374	0'718
ROHILCUND DIVISION.			
18. Bareilly	3,119	1'378	0'178
19. Bijnour	1,900	0'696	0'119
20. Budaon	2,402	1'019	0'112
21. Moradabad	2,699	1'138	0'136
22. Shajehanpore	2,308	0'986	0'106
	12,428	5'217	0'651
ALLAHABAD DIVISION.			
23. Allahabad	2,788	1'380	0'213
24. Banda	3,010	0'744	0'159
25. Cawnpore	2,348	1'175	0'213
26. Futtehpoore	1,583	0'680	0'143
27. Humeerpore	2,242	0'549	0'114
	11,971	4'528	0'842

TABLE O.—Continued.

Divisions and Districts.	Area. (Approximate.)	Population. 1855-6. (Approximate.)	Land Revenue.
	Sq. Miles.	Millions.	Millions. £
BENARES DIVISION.			
28. Azimghurh	2,516	1'653	0'150
29. Benares	996	0'852	0'091
30. Ghazeepore	2,181	1'596	0'150
31. Goruckpore	7,340	3'088	0'212
32. Jaunpore	1,552	1'144	0'125
33. Mirzapore	5,152	1'104	0'084
	19,737	9'437	0'812
SAUGOR DIVISION.			
34. Hoshungabad	1,916	0'243	0'036
35. Nursingpore.....	501	0'255	0'031
36. Jubbulpore	6,237	0'443	0'052
37. Saugor	1,857	0'306	0'071
	10,511	1'247	0'190
	86,253	31'665	4'269
DISTRICTS.			
38. Ajmere	2,029	0'225	0'037
39. Jhansi	4,405	0'376	0'067
40. Jaloun			0'099
41. Kumaon	6,962	0'606	0'021
42. Nimar	302	0'025	0'003
CIS AND TRANS-SUTLEJ.			
43. Umballah.....	1,832	0'782	0'044
44. Ferozepore	2,545	0'476	0'042
45. Loodiana	1,377	0'528	0'072
46. Simla .....	....	....	0'002
47. Thanesur	2,336	0'497	0'041
48. Hoshiyapore	2,204	0'845	0'124
49. Jullundur	1,381	0'709	0'111
50. Kangra	3,207	0'719	0'067
	28,580	5'788	0'730
Total, North-Western Collectorates ...	114,833	37'453	4'999

TABLE P.

MADRAS COLLECTORATES, AREA, POPULATION, and LAND REVENUE, 1855-56.

Divisions and Districts.	Area. (Approximate.)	Population. (Approximate.)	Land Revenue.
	Sq. Miles.	Millions.	Millions. £
1. Ganjam.....	5,758	0·927	0·106
2. Vizagapatam.....	4,690	1·254	0·128
3. Rajahmundry	4,501	1·012	0·211
4. Masulipatam.....	4,711	0·521	0·112
5. Guntoor	4,752	0·570	0·151
6. Nellore.....	7,959	1·230	0·154
7. Madras City.....	27	0·720	0·006
8. Chingleput	2,717	0·583	0·081
9. Arcot, North Division.....	6,580	1·486	0·182
10. „ South Division.....	5,020	1·006	0·230
11. Tanjore.....	3,781	1·676	0·447
12. Trichinopoly	2,922	0·709	0·126
13. Madura.....	13,545	1·757	0·189
14. Tinnevely	5,482	1·269	0·232
15. Malabar	6,050	1·515	0·183
16. Canara	7,132	1·056	0·200
17. Coimbatore	8,151	1·154	0·231
18. Salem	7,499	1·195	0·190
19. Cuddapah.....	13,298	1·452	0·212
20. Bellary	12,101	1·230	0·196
21. Kurnool	3,278	0·273	0·070
<i>Total, Madras Collectorates.....</i>	129,974	22·595	3·637

TABLE Q.

BOMBAY COLLECTORATES, AREA, POPULATION, and LAND REVENUE, 1855-56.

Divisions and Districts.	Area. (Approximate.)	Population. (Approximate.)	Land Revenue.
	Sq. Miles.	Millions.	Millions. £
BOMBAY DISTRICT.			
1. Bombay	18	0·566	0·010
2. Rutnagherry.....	3,964	0·665	0·078
3. Tannah.....	5,795	0·875	0·186
4. Surat	1,629	0·493	0·219
5. Broach	1,319	0·291	0·269
6. Kaira	1,869	0·581	0·241
7. Ahmedabad	4,356	0·650	0·188
8. Dharwar	3,837	0·754	0·191
9. Belgaum	5,403	1·026	0·238
10. Poonah.....	5,298	0·666	0·120
11. Ahmednuggur	9,931	0·996	0·227
12. Sholapoor.....	4,991	0·675	0·125
13. Candeish	9,311	0·778	0·210
	57,723	9·016	2·302
SINDE DISTRICT.			
14. Kurrachee.....	19,240	0·321	0 061
15. Hydrabad.....	26,760	0·703	0·104
16. Shikarpore	11,532	0·650	0·123
Frontier District	2,147	0·043	....
17. Thur and Packur.....	3,920	0·051	0·003
	63,599	1·768	0·291
SATTARA PROVINCE.			
18. Sattara	10,222	1·006	0·253
Total, Bombay Collectorates.....	131,544	11·790	2·846

TABLE R.

PUNJAB COLLECTORATES, AREA, POPULATION, and LAND REVENUE, 1855-56.

Divisions and Districts.	Area. (Approximate.)	Population. (Approximate.)	Land Revenue.
	Sq. Miles.	Millions.	Millions. £
LAHORE DIVISION.			
1. Umritsur	2,024	0'884	0'098
2. Goojranwalla	3,752	0'553	0'051
3. Goordaspore.....	1,675	0'787	0'096
4. Lahore	2,826	0'592	0'034
5. Sealkote	1,350	0'642	0'077
	11,627	3'458	0'356
JHELUM DIVISION.			
6. Jhelum	5,350	0'429	0'071
7. Rawalpindes	5,996	0'554	0'071
8. Shahpore	3,500	0'262	0'029
9. Gujerat.....	1,916	0'518	0'054
	16,762	1'763	0'225
LEIA DIVISION.			
10. Dhera Gaze Khan	4,000	0'239	0'035
11. Dhera Ismael Khan.....	4,123	0'362	0'044
12. Khangurh.....	1,027	0'212	0'044
13. Leia	6,122	0'310	0'047
	15,272	1'123	0'170
MOOLTAN DIVISION.			
14. Jhung	5,718	0'252	0'020
15. Goojaira	4,142	0'308	0'031
16. Mooltan	5,634	0'411	0'058
	15,494	0'971	0'109
PESHAWUR DIVISION.			
17. Hazarah	2,424	0'296	0'016
18. Kohat	2,840	0'101	0'010
19. Peshawur	2,324	0'450	0'068
	7,588	0'847	0'094
Total, Punjab Collectorates	66,743	8'162	0'954

TABLE S.

SUMMARY OF RESULTS.—WHOLE OF INDIA.—*Details in preceding Tables.—*
(N) to (R) inclusive.

Collectorate Accounts.		Approximate Estimate, as per Tables N to R.				Land Revenue for the Year 1855-56.	
For Presidency of—	Including Districts and Countries under the Administration of—	Area.		Population.		Millions.	Per Cent. of Total.
		Thousands of Square Miles.	Per Cent. of Total.	Millions.	Per Cent. of Total.		
I. Bengal	{ Governor - General of India, Lt.-Governor of Bengal, Governor of Madras (for Coorg only) }	394.	47.	52.	39.	4.674	27.
II. N.W. Pro- vinces ..	{ Lieut. - Governor of N.W. Provinces }	115.	14.	37.	28.	4.999	29.
III. Madras ..	Governor of Madras ...	130.	15.	23.	18.	3.637	21.
IV. Bombay ...	Governor of Bombay...	131.	16.	12.	9.	2.846	17.
V. Punjab	Governor-Gen. of India	67.	8.	8.	6.	.954	6.
British States....	(Total)	837.	100.	132.	100.	17.110	100.

Tables relating to the State of the POPULATION of GREAT BRITAIN at the Census of 1851, with a Comparative View, at the different Ages, of the Population of FRANCE; also a Comparative Return of BIRTHS and DEATHS, 1838-1854. By CHARLES M. WILlich, Actuary, University Life Assurance Society. With some Remarks, by way of Preface, by E. T. SCARBILL, Assistant-Secretary.

[Read before the Statistical Society, 15th June, 1858.]

THE Census Returns of 1851, for Great Britain, are so complete, as regards both the sex and the respective ages of the then existing population, that I have considered it interesting to tabulate the results in quinquennial periods, and to calculate the per centage, both with reference to the whole of the population, and the Male and Female portion. I have also divided the *Males* into three classes, of Unmarried, Married, and Widowers; and the *Females* also into three classes, of Unmarried, Married, and Widows. I have so arranged the annexed Tables, that the per centage may be seen, as well as the numbers existing in each 100,000 of the Class; also the proportion of the Classes of Males and Females in each 100 or 100,000 of the population.

The announcement made some time ago that in France, in the year 1854, the *deaths* had exceeded the *births* by 69,318, induced me to draw out a comparative statement of the Populations of Great Britain and France, in order that the effects of such decrease might be traced in the state of the population classed quinquennially.

For the facts with reference to the French population, I am indebted to *M. Mathieu*, who has given very interesting details in the "Annuaire" for this year, published by the "*Bureau des Longitudes*," in Paris.

It does not appear that in the French Census the age of the party is registered as in England; but *M. Mathieu* has deduced the numbers at each age by approximation, and probably he has arrived very near the truth. I shall assume the correctness of his Table.

The Tables which I beg to submit to the Statistical Society are as follows:—

TABLE I.—Comparative View of the Population of *Great Britain* with that of *France*; showing the numbers living under the age of 15, between 15 and 20, and so on to the end of life.

TABLE II.—Comparative View of the *Male* and *Female* Population of *Great Britain* at the Census of 1851.

TABLE III.—Comparative View of the *Unmarried* Population of *Great Britain* at the Census of 1851.

TABLE IV.—Comparative View of the *Married* Population of *Great Britain* at the Census of 1851.

TABLE V.—Comparative View of the *Widowers and Widows* in the Population of *Great Britain* at the Census of 1851.

N.B.—In the above Tables the per centage, as well as the then existing numbers in each 100,000, is stated opposite each group of ages.

TABLE VI.—Comparative View of the *Male and Female* Population of *Great Britain*, at the Census of 1851, showing the number of the Unmarried, Married, Widowers, and Widows, with the respective per centage and numbers existing of each class in 100,000 of the Population.

TABLE VII.—Comparative View of the then existing *Populations* of *Great Britain and France* at different periods in the present century.

TABLE VIII.—Comparative View of the *Births and Deaths* in *England and Wales*, and in *France*, showing a surplus of Births from the year 1838 to 1854, when in France there was a deficiency of 69,318.

Some of the results which are disclosed by an examination of these Tables, appear to me to be important, and well deserving the attention of the statistical inquirer.

Remarks, by way of Preface, by E. T. SCARGILL.

For the purpose of obtaining a general view of the state of the population at various ages, it will be convenient to take the numbers of persons living. (1.) Under 20 years of age; (2.) Above 20 and under 50; (3.) 50 and upwards. Omitting numbers under 1,000 Table I gives

Population of Great Britain in 1831, and France in 1858.

Great Britain.		Ages.	France.	
Numbers Living, Male and Female.	Per Centages.		Per Centages.	Numbers Living, Male and Female.
9,502,000	45	0—20	39	13,659,000
8,473,000	41	20—50	42	14,552,000
2,984,000	14	50 & upwds.	19	6,649,000
20,959,000	100		100	34,860,000

According to these figures, the proportion of *children and young persons* to Adults is about *one-seventh more* in Great Britain than it is

in France, one inference from which is, that marriages in Great Britain are more fruitful than in France; and another, that the population in Great Britain is in a more rapid state of advance than that in France. The per centage of persons living under the age of 15 is 35 in Great Britain and 30 in France.

From Table II we find that the total number of Men aged from 20 to 50, which may be taken as the total number capable of bearing arms, was 4,063,000 for Great Britain in 1851. The total number of adult males, 20 to 50, in Ireland that year was 1,147,000; making a total of 5,210,000 for the United Kingdom. The French population not being distributed according to sexes, the exact number cannot be arrived at; but as the total number of men and women between the above-mentioned ages is 14,552,000, we may take 7,250,000 as a fair approximation to the truth.

The ratio of the adult males to the corresponding number in France may be therefore taken as being, according to the latest returns,

10,000 to 13,915.

In 1821 the total population of the United Kingdom was 20,983,000, and that of France 30,451,000; if, therefore, the proportions of persons living at various ages were, in 1821, nearly the same as at present, the relation between the adult males of the two countries may be measured by the ratio 20,983 to 30,451, or

10,000 to 14,513.

Another method of comparing the numbers of adult males in the two countries is this—

The total population of the United Kingdom in 1851 was 27,511,000; in 1821, 20,983,000; and the adult males between 20 and 50, in 1851 were 5,210,000; hence, by the Rule of Proportion, the number of adult males between 20 and 50 in 1821 was 3,974,000.

Similarly, the total population of France in 1851 being 35,783,000, and in 1821, 30,451,000; and the number of adult males in 1851 being 7,250,000, the number of adult males in 1821 was 6,170,000.

The ratio of 3,974,000 to 6,170,000 is

10,000 to 15,526,

which shews a greater falling off as regards France than the result of 10,000 to 14,513, obtained by the former hypothesis.

But whatever hypothesis may be adopted, it is clear, that during the thirty years, 1821-51, the relative numbers of Adult Males in the United Kingdom and France have undergone changes *materially in favour* of the United Kingdom. It seems also certain, that during the seven years since 1851, this favourable tendency, as regards the United Kingdom, has become still more marked, not only as concerns the number of adult males now living in the two

countries, but also as concerns the capacities of increase in the respective Total Populations.

Combining the results deduced from Tables III and V, we have the following results relative to the marriageable parts of the population of Great Britain, *i.e.*, bachelors, widowers, spinsters, and widows, between the ages of 20 and 50 :—

Bachelors.....	1,551,000	.....	Spinsters.....	1,563,000
Widowers	109,000	.....	Widows	223,000
	<u>1,660,000</u>			<u>1,786,000</u>

showing a surplus of 126,000 marriageable women.

If we go beyond the age of 50 the number of Unmarried Women at each age is considerably greater than that of unmarried men.

Table IV gives us the following figures with regard to the ages of married persons in Great Britain :—

	Men.	Women.
0—20	4,000	26,000
20—50	2,402,000	2,623,000
50 & upwds.	984,000	813,000
	<u>3,390,000</u>	<u>3,462,000</u>

Hence we see that of the whole population of Great Britain, between 20 and 50 years of age, about *three-fifths only are married*.

In reading Table VIII the attention is at once attracted by the fact that in the year 1854 the number of Deaths in France exceeded the births by 69,000. The numbers of *births* do not steadily increase or decrease; in 1838 they were 961,000, in 1854 923,000; the greatest number was 995,000 in 1849, and the smallest 918,000 in 1847; the *deaths* in 1834 were 846,000, and 992,000 in 1854, which last is the greatest number during the 17 years tabulated, the smallest being 754,000 in 1845.

In England and Wales the *births* rise from 463,000 in 1834 to 635,000 in 1855; those in 1847 fell short of those in 1846 and 1848, as did those of 1853 of those in 1852 and 1854. The number of *deaths* rises from 342,000 in 1834 to 425,000 in 1855, though not so steadily as the births; the highest number is 440,000 in 1849.

TABLE I.

Comparative View of the State of the POPULATIONS of GREAT BRITAIN in 1851, and of FRANCE as given by M. Mathieu, Annuaire, 1858, p. 212.

1	2	3	4	5	6
GREAT BRITAIN.—Total 20,959,477. Census 1851.			FRANCE.—Total 34,860,387, as given by M. Mathieu, 1858, p. 212.		
Ages. Males and Females.	Males and Females. Numbers Living at the respective Ages.	Per Centage.	Per Centage.	Males and Females. Numbers Living at the respective Ages.	Ages. Males and Females.
Under 15	7,431,542	35'456	30'165	10,515,539	Under 15
15 to 20	2,070,736	9'880	9'018	3,143,668	15 to 20
20 „ 25	1,960,504	9'354	8'532	2,974,383	20 „ 25
25 „ 30	1,712,438	8'170	7'879	2,746,594	25 „ 30
30 „ 35	1,479,601	7'059	7'233	2,521,420	30 „ 35
35 „ 40	1,262,016	6'021	6'622	2,308,594	35 „ 40
40 „ 45	1,130,131	5'392	6'031	2,102,254	40 „ 45
45 „ 50	927,810	4'426	5'447	1,898,825	45 „ 50
50 „ 55	833,679	3'977	4'835	1,685,681	50 „ 55
55 „ 60	611,653	2'918	4'190	1,460,075	55 „ 60
60 „ 65	563,575	2'689	3'513	1,224,802	60 „ 65
65 „ 70	381,571	1'820	2'748	958,157	65 „ 70
70 „ 75	293,851	1'402	1'914	667,258	70 „ 75
75 „ 80	170,953	'816	1'142	398,034	75 „ 80
80 „ 85	89,004	'425	'516	179,747	80 „ 85
85 „ 90	30,593	'146	'165	57,649	85 „ 90
90 „ 95	7,787	'037	'044	15,200	90 „ 95
95 „ 100	1,714	'008	'005	1,907	95 „ 100
Above 100	319	'001	....	....	Above 100
	20,959,477	100°	100°	34,860,387	

TABLE II.

*Comparative View of the Male and Female POPULATION of GREAT BRITAIN.
Census 1851.*

1	2	3	4	5	6
Males.—Total 10,223,558.			Females.—Total 10,735,919.		
Ages. (Males.)	Males. Numbers Living at the respective Ages.	Per Centage.	Per Centage.	Females. Numbers Living at the respective Ages.	Ages. (Females.)
Under 15	3,739,324	36.575	34.391	3,692,218	Under 15
15 to 20	1,025,419	10.030	9.737	1,045,317	15 to 20
20 „ 25	930,048	9.097	9.598	1,030,456	20 „ 25
25 „ 30	808,705	7.910	8.417	903,733	25 „ 30
30 „ 35	710,890	6.953	7.160	768,711	30 „ 35
35 „ 40	612,374	5.989	6.051	649,642	35 „ 40
40 „ 45	548,694	5.366	5.416	581,437	40 „ 45
45 „ 50	452,542	4.426	4.427	475,268	45 „ 50
50 „ 55	402,533	3.937	4.016	431,146	50 „ 55
55 „ 60	293,416	2.870	2.964	318,237	55 „ 60
60 „ 65	262,461	2.567	2.804	301,114	60 „ 65
65 „ 70	174,935	1.710	1.925	206,636	65 „ 70
70 „ 75	133,187	1.302	1.496	160,664	70 „ 75
75 „ 80	75,474	.738	.889	95,479	75 „ 80
80 „ 85	37,648	.368	.478	51,356	80 „ 85
85 „ 90	12,390	.121	.169	18,203	85 „ 90
90 „ 95	2,823	.028	.046	4,964	90 „ 95
95 „ 100	584	.006	.010	1,130	95 „ 100
Above 100	111	.000	.001	208	Above 100
	10,223,558	100	100	10,735,919	

TABLE III.

*Comparative View of the UNMARRIED POPULATION of GREAT BRITAIN.
Census 1851.*

1	2	3	4	5	6
Males.—Unmarried. Total 6,449,318.			Females.—Unmarried. Total 6,478,805.		
Ages. (Males.)	Males, Unmarried. Numbers Living at the respective Ages.	Per Centage.	Per Centage.	Females, Unmarried. Numbers Living at the respective Ages.	Ages. (Females.)
Under 15	3,739,324	57.980	56.990	3,692,218	Under 15
15 to 20	1,020,878	15.829	15.734	1,010,393	15 to 20
20 „ 25	746,143	11.569	11.081	717,955	20 „ 25
25 „ 30	364,278	5.648	5.685	368,301	25 „ 30
30 „ 35	189,675	2.941	3.062	196,375	30 „ 35
35 „ 40	113,816	1.764	1.892	122,594	35 „ 40
40 „ 45	80,833	1.254	1.401	90,760	40 „ 45
45 „ 50	56,485	.875	1.007	65,241	45 „ 50
50 „ 55	44,947	.697	.881	57,081	50 „ 55
55 „ 60	30,435	.472	.620	40,213	55 „ 60
60 „ 65	25,789	.400	.607	39,331	60 „ 65
65 „ 70	15,403	.239	.394	25,530	65 „ 70
70 „ 75	11,446	.177	.315	20,441	70 „ 75
75 „ 80	5,969	.092	.182	11,795	75 „ 80
80 „ 85	2,567	.040	.102	6,605	80 „ 85
85 „ 90	916	.014	.033	2,173	85 „ 90
90 „ 95	228	.003	.009	624	90 „ 95
95 „ 100	72	.001	.002	133	95 „ 100
Above 100	14	.000	.000	42	Above 100
	6,449,318	100	100	6,478,805	

TABLE IV.

*Comparative View of the MARRIED POPULATION of GREAT BRITAIN.
Census 1851.*

1	2	3	4	5	6
Males.—Married. Total 3,391,271.			Females.—Married. Total 3,461,524.		
Ages. (Males.)	Males, Married. Numbers Living at the respective Ages.	Per Centage.	Per Centage.	Females, Married. Numbers Living at the respective Ages.	Ages. (Females.)
Under 15	....	....	....	....	Under 15
15 to 20	4,460	·131	·739	25,607	15 to 20
20 „ 25	181,443	5·350	8·880	307,395	20 „ 25
25 „ 30	435,004	12·827	14·968	518,127	25 „ 30
30 „ 35	504,884	14·887	15·557	638,519	30 „ 35
35 „ 40	477,264	14·073	14·005	484,812	35 „ 40
40 „ 45	439,362	12·955	12·434	430,418	40 „ 45
45 „ 50	364,679	10·753	9·925	343,565	45 „ 50
50 „ 55	318,297	9·385	8·321	288,042	50 „ 55
55 „ 60	225,695	6·655	5·691	197,015	55 „ 60
60 „ 65	189,050	5·575	4·488	155,366	60 „ 65
65 „ 70	116,752	3·442	2·579	89,278	65 „ 70
70 „ 75	76,982	2·270	1·500	51,947	70 „ 75
75 „ 80	37,444	1·104	·643	22,276	75 „ 80
80 „ 85	15,169	·447	·210	7,265	80 „ 85
85 „ 90	3,875	·114	·045	1,568	85 „ 90
90 „ 95	728	·021	·007	268	90 „ 95
95 „ 100	153	·004	·001	51	95 „ 100
Above 100	30	·000	·000	5	Above 100
	3,391,271	100·	100·	3,461,524	

TABLE V.

Comparative View of the WIDOWERS and WIDOWS in the Population of GREAT BRITAIN. Census 1851.

1	2	3	4	5	6
Males.—Widowers. Total 382,969.			Females.—Widows. Total 795,590.		
Age. (Males.)	Males, Widowers, Numbers Living at the respective Ages.	Per Centage.	Per Centage.	Females, Widows, Numbers Living at the respective Ages.	Age. (Females.)
Under 15	....	....	....	....	Under 15
15 to 20	81	·021	·039	317	15 to 20
20 „ 25	2,462	·643	·642	5,106	20 „ 25
25 „ 30	9,423	2·460	2·175	17,305	25 „ 30
30 „ 35	16,331	4·264	3·999	31,817	30 „ 35
35 „ 40	21,294	5·560	5·309	42,236	35 „ 40
40 „ 45	28,399	7·415	7·574	60,259	40 „ 45
45 „ 50	31,378	8·193	8·354	66,462	45 „ 50
50 „ 55	39,289	10·259	10·812	86,023	50 „ 55
55 „ 60	37,286	9·736	10·182	81,009	55 „ 60
60 „ 65	47,622	12·435	13·375	106,417	60 „ 65
65 „ 70	42,780	11·170	11·452	91,828	65 „ 70
70 „ 75	44,759	11·687	11·095	88,276	70 „ 75
75 „ 80	32,061	8·371	7·718	61,408	75 „ 80
80 „ 85	19,912	5·199	4·712	37,486	80 „ 85
85 „ 90	7,599	1·984	1·817	14,462	85 „ 90
90 „ 95	1,867	·487	·512	4,072	90 „ 95
95 „ 100	359	·094	·119	946	95 „ 100
Above 100	67	·017	·020	161	Above 100
	382,969	100°	100°	795,590	

TABLE VI.
General Comparative View of the POPULATION of GREAT BRITAIN.
Census 1851.

1	2	3	4	5	6
Males.			Females.		
	Population, Census 1851.	Per Centage.	Per Centage.	Population, Census 1851.	
Unmarried	6,449,318	30·770	30·911	6,478,805	Unmarried
Married	3,391,271	16·180	16·515	3,461,524	Married
Widowers	382,969	1·827	3·795	795,590	Widows
Total Males....	10,223,558	48·777	51·221	10,735,919	Total Females
Total Females	10,735,919	51·223	48·779	10,223,558	Total Males
	20,959,477	100·000	100·000	20,959,477	
N.B.—The proportion of Males to Fem. 95·227 Males to 100 Females.			N.B.—The proportion of Fem. to Males. 104·984 Females to 100 Males; or 105 to 100.		

TABLE VII.
Comparative View of the then existing POPULATIONS of GREAT BRITAIN and
FRANCE at different Periods in the present Century.

1	2	3	4
Great Britain.		France.	
In the Year	Total Males and Females, per Census Returns.	In the Year	Total Males and Females, as stated by M. Mathieu.*
1801.....	10,578,956	1820.....	30,451,187
1811.....	12,050,120	1831.....	32,560,934
1821.....	14,181,265	1836.....	33,540,910
1831.....	16,364,893	1841.....	34,230,178
1841.....	18,658,372	1846.....	35,401,761
1851.....	20,959,477*	1851.....	35,783,059
		1856.....	36,039,364
The increase in Great Britain in 40 years, from 1811 to 1851, is 8,909,357, or nearly 74 per cent. on the population of 1811.		The increase in France in 36 years, from 1820 to 1856, is 5,588,177, or nearly 18½ per cent. on the population of 1820.	
And in 30 years, from 1821 to 1851, the increase is 6,778,212, or 47½ per cent. on the population of 1821.			
* The population of Great Britain in 1851 was..... 20,959,477 which included Scotland, 2,888,742 amounting to Therefore England and Wales, with the Islands, amounted to 18,070,735		* Col. 4 is shown in "Annuaire pour l'an 1858, publié par le Bureau des Longitudes." p. 178.	

TABLE VIII.
Comparative View of BIRTHS and DEATHS in ENGLAND AND WALES and FRANCE.

1	2	3	4	5	6	7
England and Wales.				France.		
Year.	Births. Male and Female.	Deaths. Male and Female.	Excess of Births.	Births. Male and Female.	Deaths. Male and Female.	Excess of Births.
1838....	463,787	342,760	121,027	961,476	846,199	115,277
1839....	492,574	338,984	153,590	957,740	780,600	177,140
1840....	502,303	359,687	142,616	952,318	816,486	135,832
1841....	512,158	343,847	168,311	976,929	804,762	172,167
1842....	517,739	349,519	168,220	982,896	836,152	146,744
1843....	527,325	346,445	180,880	983,107	811,435	171,672
1844....	540,763	356,933	183,830	967,324	776,526	190,798
1845....	543,521	349,366	194,155	992,033	754,701	237,332
1846....	572,625	390,315	182,310	983,473	831,498	151,975
1847....	539,965	423,304	116,661	918,581	856,026	62,555
1848....	563,059	399,833	163,226	948,748	844,158	104,590
1849....	578,159	440,839	137,320	995,466	982,008	13,458
1850....	593,422	368,995	224,427	962,972	775,653	187,319
1851....	615,865	395,396	220,469	979,907	817,449	162,458
1852....	624,012	407,135	216,877	965,080	810,695	154,385
1853....	612,391	421,097	191,294	936,967	795,596	141,371
1854....	634,405	437,905	196,500	923,461	992,779	69,318*
1855....	635,043	425,703	209,340			
				In England and Wales.		In France.
BIRTHS—						
Proportion of Boys to Girls....				17 Boys to 16·236 Girls		17 Boys to 16·002 Girls
" of Legitimate to				14·663 to 1		12·928 to 1
" Illegitimate Children				1 Birth in 29 inhabitants		1 Birth in 34·42 inhabts.
" of Births to Popln.						
DEATHS—						
Proportion of Males to Fem.				71 Males to 69 Females		71 Males to 70·074 Fem.
" of Deaths to Popln.				1 Death in 45 inhabitants		1 Death in 40·75 inhabts.

* More deaths than births.

On the Present State of the Administration of RELIEF to the POOR in the METROPOLIS, and Charge of the POOR RATE thereon. By W. G. LUMLEY, LL.B., Assistant Secretary to the Poor Law Board, and one of the Honorary Secretaries to the Statistical Society.

[Read before the Statistical Society of London, 20th April, 1858.]

(Continued from page 197.)

LIST OF TABLES:

	Page		Page
A.—Population of the Different Portions of the Metropolis	309	F.—Number of Paupers in the Metropolis Relieved in 1803, 1st July, 1857, and 1st January, 1858	327
B.—Extent of the several Parishes in the Metropolis, the Number of Inhabited Houses, Number of Families, and Number of Houses rated to the Poor in 1856	311	G.—City of London Union. Population and Inhabited Houses, 1851. Expenditure on Relief of the Poor in 1776, 1783-4-5, 1834, 1856. Annual Value Assessed to Poor Rate in 1847, 1853, 1857, and Rate in the Pound 1803, '47, '53, and '57, distributed among the different parishes ...	330
C.—Expenditure on the Relief of the Poor in the different portions of the Metropolis, 1776-1856	315	H.—General Tables of the Metropolis for the year ended Lady-day, 1857, showing Gross Rental: Net Annual Value: Poor Rates and Pauperism in the different portions	334
D.—Annual Value of Property Assessed to Property Tax in 1815, '43, and '55; to County Rate in 1855; to Poor Rate in 1847, '53, and '56; and Rate in Pound of Relief to Poor in 1803, '47, '53, and '57	318	I.—State, in 1856, of the Ancient Parishes of St. Dunstan, Stepney, and St. Martin-in-the-Fields, compared with that of some of the large Parishes in the Metropolis and in other parts of England	336
E.—Further Information as to the Annual Value of Real Property in the Metropolis in 1857	326		

THE following tables were prepared to accompany the Paper upon the Administration of the Relief of the Poor and the Charge of the Poor Rate in the Metropolis, printed at pages 169—197.

The returns having been again verified and corrected, the columns recast, and some returns published since the compilation of the Paper having been consulted, a few variations will appear between the results shown in the Paper and those disclosed in this Appendix. They do not, however, at all affect the general results, nor materially alter the relative proportions between the different parts of the Metropolis; but the following corrections are requested to be made upon page 189. The sum expended for the Relief of the Poor for the Western Portion of Middlesex, in 1776, should be 73,281*l.*, instead of 46,781*l.*; and for the Eastern Portion the following statement should be substituted.

In 1776	In 1783-4-5.	In 1803.	In 1856.	Rate of Increase between 1803 & 1856.
£41,336	.... £42,203	.... £71,206	.... £213,112	.... 199.3

and instead of the table printed on page 192, the Summary printed on pages 324 and 325 should be referred to.

It is proper also to add, with reference to the severed parishes set forth on page 173, that in 1783, the parish of *St. Luke, Middlesex*, was carved out of the ancient parish of *St. Giles, Cripplegate*, by the 6 Geo. II, c. 21, and in 1678, the parish of *St. Anne, Soho*, was severed from the parish of *St. Martin-in-the-Fields* by the 30 Ch. II. c. 7.

TABLE A.
Population of the Different Portions of the Metropolis.

	2	3	4	5
DIVISIONS.	1801.	1831.	1841.	1851.
I. KENTISH PORTION.				
Greenwich Union	42,447	63,564	80,997	99,365
Lewisham Union	8,056	18,426	23,014	34,835
	50,503	81,990	104,011	134,200
II. MIDDLESEX, WESTERN.				
Fulham Union	10,028	17,539	22,772	29,646
Chelsea	11,604	32,371	40,179	56,538
Kensington	8,556	20,902	26,834	44,053
Paddington	1,881	14,540	25,173	46,305
St. George, Hanover Square....	38,440	58,209	66,552	73,230
St. Margaret and St. John	25,883	48,177	56,712	65,609
St. Martin-in-the-Fields	27,437	23,970	25,091	24,640
St. James, Westminster	34,462	37,053	37,398	36,406
Marylebone	63,982	122,206	138,164	157,696
Hampstead	4,343	8,588	10,093	11,986
	226,616	383,555	448,968	546,109
III. MIDDLESEX, CENTRAL.				
St. Pancras	31,779	103,548	129,763	166,956
Islington	10,212	37,316	55,690	95,329
Holborn Union	34,618	42,696	44,461	46,621
St. Giles and Bloomsbury	36,502	52,907	54,292	54,214
Strand Union	35,054	42,015	43,598	44,460
Clerkenwell	23,396	47,634	56,756	64,778
City of London Union	64,615	57,080	55,920	55,932
West London ,,	28,387	28,217	29,142	28,790
St. Luke	26,881	46,642	49,829	54,055
	291,444	458,055	519,451	611,135

TABLE A.—Continued.

1	2	3	4	5
DIVISIONS.	1801.	1831.	1841.	1851.
IV. MIDDLESEX EASTERN.				
East London Union	35,831	38,311	39,655	44,406
Shoreditch	34,766	68,564	83,432	109,257
Bethnal Green	22,310	62,018	74,088	90,193
Hackney Union	14,192	34,527	42,261	58,429
Whitechapel „	57,202	64,141	71,765	79,759
St. George-in-the-East.....	21,170	38,505	41,350	48,376
Stepney Union	34,909	72,442	90,687	110,775
Poplar „	8,278	25,066	31,122	47,162
	228,658	403,574	474,360	588,357
V. SURREY.				
Bermondsey	17,169	29,741	34,947	48,128
Camberwell	7,059	28,231	39,868	54,667
St. George, Southwark.....	22,293	39,769	46,644	51,824
Lambeth	27,985	87,856	115,888	139,325
Newington, St. Mary	14,847	44,526	54,606	64,816
St. Olave Union	18,816	20,021	19,837	19,375
Rotherhithe	10,296	12,875	13,917	17,805
St. Saviour's Union	25,529	31,711	32,975	35,731
Wandsworth and Clapham Un.	17,648	33,090	39,855	50,764
	161,642	327,820	398,537	482,435

Summary.

Kentish Portion	50,503	81,990	104,011	184,200
Middlesex Western	226,616	383,555	448,968	546,109
„ Central	291,444	458,055	519,481	611,135
„ Eastern	228,658	403,574	474,360	588,357
Surrey Portion	161,642	327,820	398,537	482,435
	958,863	1,654,094	1,945,327	2,362,236

TABLE B.

Showing the Extent of the several Parishes of the Metropolis, the Number of Inhabited Houses, Number of Families, and Number of Houses Rated to the Poor in 1856.

[The Report on the Census gives the information from which the following table has been framed, as to the Number of Inhabited Houses in 1851, and the Number of Families and the extent of the several Parishes. The Parliamentary Paper, No. 337, 56/37, Sess. 2, shows the Number of Houses Rated to the Relief of the Poor in the Metropolitan Boroughs and the City of Westminster in 1856. The City of London, comprising three Unions, and the Fulham and the Wandsworth and Clapham Unions, with the Parishes of Chelsea, Hampstead, and Kensington, are omitted; and as the Boroughs of Greenwich and Lambeth are not quite co-extensive with the Kentish Unions and the Surrey Parishes, there is a small incompleteness in the comparison between 1851 and 1856.]

Parts only of the Parishes marked thus (*) are included in the Return.

1	2	3	4	5
DIVISIONS.	Number of Inhabited Houses in 1851.	Number of Families or Occupiers.	Number of Houses Rated to the Poor Rate in 1856.	Extent in Acres.
I.—KENTISH PORTION.				
<i>Greenwich Union—</i>				
Greenwich	5,364		6,275*	2,013
Deptford, St. Nicholas	1,122		1,274	149
Deptford, St. Paul	4,177		5,418	1,609
Woolwich	3,720		4,300*	1,596
<i>Lewisham Union—</i>	14,383	20,706	17,267	5,367
Lewisham	2,617		...	5,789
Charlton	775		765*	1,342
Eltham	450		...	3,712
Mottingham	22		...	638
Kidbrook	77		...	755
Lee	610		...	1,273
Plumstead	1,376		2,274*	3,715
	5,927	7,144	3,039	17,224
TOTAL	20,310	27,850		22,591
II. MIDDLESEX WESTERN.				
<i>Fulham Union—</i>				
Fulham	1,797		...	1,834
Hammersmith	3,115		...	2,321
	4,912			4,155
Kensington	6,136	25,475	8161	1,942
Paddington	6,103			1,277
Chelsea	7,591	13,530	...	865
St. George, Hanover Square	8,792	16,210	9,812	1,161
St. Margaret and St. John	6,642	15,041	6,869	917
St. Martin-in-the-Fields	2,307	5,252	2,202	305
St. James, Westminster	3,399	7,716	3,620	164
Marylebone	15,826	36,395	15,866	1,509
Hampstead	1,719	2,424	...	2,252
TOTAL	63,427	122,043	...	14,547

TABLE B.—*Contd.—Extent ; Inhabited Houses ;*

1	2	3	4	5
DIVISIONS.	Number of Inhabited Houses in 1861.	Number of Families or Occupiers.	Number of Houses Rated to the Poor Rate in 1866.	Extent in Acres.
III. MIDDLESEX CENTRAL.				
St. Pancras	18,584	41,379	19,856	2,716
Islington	13,528	20,958	17,327	3,127
<i>Holborn Union—</i>				
St. Andrew and St. George	2,875		2,698	111
Saffron Hill, &c.	797		730	30
St. Sepulchre, Middlesex	527		466	20
	4,199	10,251	3,894	161
St. Giles and Bloomsbury	4,700	12,659	4,477	245
<i>The Strand Union—</i>				
St. Mary-le-Strand	213		260	22
St. Anne, Soho	1,354		1,447	53
Savoy	53		89	11
St. Paul, Covent Garden	549		553	26
St. Clement Danes	1,436		1,794	43
Liberty of the Rolls	293		324	11
	3,898	11,117	4,467	166
Clerkenwell	7,224	15,852	7,755*	380
City of London Union	7,297	11,634	no ret.	434
<i>West London Union—</i>				
St. Bride	623			32
St. Bartholomew, Great	337			9
St. Bartholomew, Less	8			4
St. Sepulchre	714			34
Bridewell Precincts	51			8
St. Andrew Lower Liberty	519			20
St. Dunstan in the West	303			11
	2,555	6,002	no ret.	118
St. Luke	6,349	13,411	4,921	220
TOTAL	68,334	143,263		7,567
IV. MIDDLESEX EASTERN.				
<i>East London Union—</i>				
St. Botolph, without Aldgate..	1,242			45
St. Botolph, Bishopsgate	1,231			40
St. Giles, Cripplegate	1,566			43
St. Botolph, without Alderagt.	700			25
	4,739	9,699	no ret.	153
Shoreditch	15,337	25,998	17,277	646
Bethnal Green	13,298	20,547	15,768	760

Houses rated, 1856.—TABLE B.—Contd.

1	2	3	4	5
DIVISIONS.	Number of Inhabited Houses in 1851.	Number of Families or Occupiers.	Number of Houses Rated to the Poor Rate in 1856.	Extent in Acres.
Hackney Union—				
Hackney	9,027		10,710	3,290
Stoke Newington	791		947	639
	9,818	12,269	11,657	3,929
Whitechapel Union—				
St. Mary Whitechapel	4,424		5,414	174
Norton Folgate	223		235	9
Old Artillery Ground	182		189	5
Christchurch, Spitalfields	2,154		2,126	74
Mile End New Town	1,172		1,188	42
Old Tower of London	41		46	37
St. Botolph, Aldgate, without	485		497	37
St. Katharine, by the Tower....	12		9	23
Trinity, Minorics	63		75	5
	8,756	16,273	9,779	406
St. George-in-the-East.....	6,146	11,019	6,401	243
Stepney Union—				
Limehouse.....	3,269		3,690	265
Shadwell	1,559		1,848	99
Mile End Old Town	8,867		10,522	681
Ratcliffe.....	2,076		2,301	132
Wapping	488		506	80
	16,259	25,034	18,867	1,257
Poplar Union—				
Poplar	3,910		5,029	1,490
Bromley.....	1,796		3,012	619
Stratford-le-Bow	1,125		1,484	809
	6,831	9,558	9,525	2,918
TOTAL	81,184	130,397		10,312
V. SURREY.				
Bermondsey	7,007	11,539	7,676	688
Camberwell	9,412	12,227	11,373*	4,342
St. George, Southwark.....	6,992	12,206	7,520	282
Lambeth	20,447	31,306	23,417*	4,015
Newington St. Mary.....	10,458	15,978	12,465	624
St. Olave Union—				
St. Olave	773		799	66
St. Thomas	107		127	9
St. John, Horsleydown.....	1,480		1,499	94
	2,360	4,184	2,415	169

TABLE B.—*Continued.*

1	2	3	4	5
DIVISIONS.	Number of Inhabited Houses in 1851.	Number of Families or Occupiers.	Number of Houses Rated to the Poor Rate in 1856.	Extent in Acres.
Rotherhithe	2,792	3,827	3,510	886
<i>St. Saviour's Union—</i>				
St. Saviour	2,713		2,626	155
Christchurch	1,887		1,887	95
	4,600	8,643	4,513	250
<i>Wandsworth and Clapham Un.—</i>				
Wandsworth	1,522			2,478
Clapham	2,657			1,233
Putney	918			2,176
Streatham	1,061			2,904
Tooting Gravesey	358			561
Battersea	1,760			2,343
	8,276	10,117		11,695
TOTAL	72,344	110,027		22,951

Summary.

	No. of Inhabited Houses.	Extent in Acres.
Kentish Portion.....	20,310	22,591
Middlesex Western....	63,427	14,547
„ Central	68,334	7,567
„ Eastern	81,184	10,312
„ Surrey Portion	72,344	22,951
	305,599	77,968
Add for Extra-parochial places	334	61
	305,933	78,029

It appears by the Report of the Census Commissioners that the Total Number of Families or Occupiers in the Metropolis was 533,580.

The Average Number of Persons to each Inhabited House is given as follows :—

	In 1841.	In 1851.
In the Kentish Portion	6·5	6·6
„ Middlesex Portion	7·8	8·2
„ Surrey Portion	6·4	6·7

TABLE C.

Expenditure in the Metropolis upon the Relief of the Poor 1776—1856.

The following Table shows the Expenditure on the Relief of the Poor in the year 1776; the Average of the Three Years 1783, 1784, and 1785, each year ending at Lady Day; and the Expenditure for the Years ended Lady Day 1803, 1834, and 1856. It is compiled from the Parliamentary Reports referred to in the Paper and the annual Reports of the Poor Law Board.

The Parishes marked thus (*) are governed by a Local Act.

1	2	3	4	5	6
Parishes and Unions.	Expenditure in 1776.	Average Expenditure in 1783-84-85.	Expenditure in 1802-3.	Expenditure in 1833-4.	Expenditure in 1856.
I. KENTISH PORTION.	£	£	£	£	£
<i>Greenwich Union—</i>					
Greenwich*.....	2,080	3,010	5,176	8,814	11,539
St. Nicholas, Deptford*	986	998	2,174	1,873	3,469
St. Paul, Deptford* ...	1,126	1,424	2,777	5,591	8,168
Woolwich*	1,299	1,667	2,099	8,164	7,549
	5,440	6,999	12,226	24,442	30,718
<i>Lewisham Union—</i>					
Charleston	108	180	211	674	942
Eltham	234	389	1,098	1,431	1,191
Kidbrooke .....	..	10	..	90	25
Lee	9	58	146	469	685
Lewisham*	676	784	2,543	3,109	4,725
Mottingham	9	58	146	47	42
Plumstead	263	340	453	1,757	1,401
	1,394	1,779	4,597	7,557	8,961
TOTAL	£6,734	8,778	16,823	31,999	39,679
II. MIDDLESEX, WESTN.					
<i>Fulham Union—</i>					
Fulham	1,066	961	1,196	2,541	7,134
Hammerwich*	581	1,084	2,561	3,316	8,573
	1,617	2,045	3,757	5,857	16,007
<i>Chelsea*</i>	1,310	1,935	4,674	12,613	19,531
<i>Kensington*</i>	1,806	2,351	3,903	8,546	16,523
<i>Paddington*</i>	165	398	694	3,517	11,523
<i>St. Geo., Hanover Sq.* ..</i>	9,844	12,464	17,473	26,517	21,215
<i>St. Marg. and St. John* ..</i>	5,177	6,006	11,008	12,616	23,300
<i>St. Martin in-the-Fields* ..</i>	9,784	9,145	10,369	19,557	18,092
<i>St. James, Westminster* ..</i>	10,106	11,163	20,903	11,382	18,920
<i>St. Marylebone*</i>	4,913	8,724	29,954	40,899	59,155
<i>Hampstead*</i>	916	1,070	2,668	3,186	5,568
TOTAL	£45,668	55,181	105,302	144,720	210,224

TABLE C.—Continued.

1	2	3	4	5	6
Parishes and Unions.	Expenditure in 1776.	Average Expenditure in 1783-84-85.	Expenditure in 1802-3.	Expenditure in 1833-4.	Expenditure in 1866.
	£	£	£	£	£
III. MIDD. CENTRAL.					
St. Pancras*	1,205	1,668	9,192	23,608	47,564
Islington*	1,125	1,936	6,226	10,675	20,112
<i>Islington Union—</i>					
St. Andrew and St. Geo.*	4,550	6,181	9,066	10,583	11,247
Saffron Hill, &c.*	1,454	1,466	2,964	3,866	3,260
St. Sepulchre, Middlx.*	802	1,283	3,886	2,719	1,955
	6,806	7,860	15,866	17,168	16,462
St. Giles & Bloomsbury* ..	5,156	4,568	14,084	26,048	16,197
<i>Strand Union—</i>					
St. Mary-le-Strand* ...	654	744	1,155	1,542	1,207
St. Anne, Soho*	3,050	2,848	4,984	8,478	6,795
Savoy	133	207	248	273	93
St. Paul, Covent Gar.*	1,672	1,198	3,291	4,498	1,822
St. Clement Danes*	4,809	6,295	6,896	10,806	9,407
Liberty of the Rolls* ..	818	876	1,955	2,669	1,569
	11,086	11,168	18,529	28,265	19,893
Clerkenwell*	2,863	4,174	8,778	16,368	17,801
City of London Union ...	20,681	32,492	61,206	61,675	61,595
<i>West London Union—</i>					
St. Bride*	2,794	2,698	3,478	3,960	5,176
St. Bartholomew, Great	1,329	1,565	3,478	1,438	2,235
St. Bartholomew, Less ..	196	140	206	318	206
St. Sepulchre, London ..	2,417	2,833	2,168	5,939	7,068
Bridewell Precincts ...	161	161	272	471	332
St. Andrew, Lower Lit.	1,329	1,565	3,478	3,076	4,991
St. Dunstan in the West*	1,063	1,127	2,051	2,555	2,514
	9,989	10,069	15,181	17,757	22,522
St. Luke*	5,180	4,216	11,105	14,895	16,901
TOTAL	£73,281	78,081	150,087	225,859	229,047
IV. MIDDLESEX EASTN.					
<i>East London Union—</i>					
St. Botolph, Aldgate* ..	2,824	2,366	3,492	4,279	5,480
St. Botolph, Bishopsg.*	3,175	3,572	8,009	6,722	9,365
St. Botolph, Aldersgate*	1,499	1,704	1,706	2,321	2,996
St. Giles, Cripplegate ..	2,861	2,889	4,439	6,507	7,438
	9,859	10,521	17,646	19,829	25,279
Shoreditch*	3,787	4,777	7,927	23,803	33,711
Bethnal Green*	2,825	2,688	3,484	17,939	20,661
<i>Stepney Union—</i>					
Limehouse*	1,080	1,068	1,769	3,250	7,781
Shadwell*	1,892	2,471	3,268	3,808	5,068
Mile End Old Town* ..	574	677	1,015	10,518	14,009
Ratcliffe* ..	1,412	1,135	2,641	3,965	6,835
Wapping*	2,033	2,014	1,967	3,310	2,430
	6,991	7,365	10,645	24,871	36,713
Card. Forwd. ..	28,412	25,361	39,702	86,442	121,364

Expenditure on the Relief of the Poor, 1776-1856.

1	2	3	4	5	6
Parishes and Unions.	Expenditure in 1776.	Average Expenditure in 1783-84-85.	Expenditure in 1802-3.	Expenditure in 1833-4.	Expenditure in 1856.
Brt. Fwd.	£ 28,412	£ 26,351	£ 39,702	£ 86,442	£ 121,264
<i>Hackney Union—</i>					
Hackney*	1,725	2,376	5,158	11,415	15,532
Stoke Newington	296	349	779	1,531	1,649
	2,021	2,725	5,937	12,946	17,181
<i>Whitechapel Union—</i>					
St. Mary Whitechapel* ..	4,060	4,114	6,565	7,984	14,506
Norton Folgate*	1,090	677	1,625	974	743
Old Artillery Ground* ..	2,595	2,673	5,322	4,587	391
Christch., Spitalfields* ..	283	431	1,075	1,789	7,850
Mile End New Town*	190	..	267	102	2,373
Tower of London	1,984	1,068	1,769	3,250	91
St. Botolph, Aldgate*	684	721	1,117	2,264	2,594
St. Katharine, by the Tr.	305	337	822	669	714
Trinity, Minorities					177
	11,191	10,021	18,062	21,932	29,438
St. George-in-the-East* ..	2,710	1,859	4,209	15,619	25,691
<i>Poplar Union—</i>					
Poplar*	631	844	1,387	10,635	13,118
Bromley*	668	683	755	3,062	3,519
Stratford-le-Bow*	708	820	1,154	2,222	2,806
	2,002	2,347	3,296	15,939	19,438
TOTAL	£41,336	42,203	71,206	152,928	213,112
V. SURREY PORTION.					
Bermondsey*	2,294	2,244	6,139	14,717	17,538
Camberwell*	1,266	1,871	2,890	12,606	16,783
St. George, Southwark* ..	1,553	2,118	6,025	15,799	17,213
Lambeth*	2,251	3,145	10,436	42,049	49,995
Newington*	894	1,839	6,685	16,285	24,652
<i>St. Olave Union—</i>					
St. Olave*	2,064	1,768	2,904	4,819	4,636
St. Thomas	342	402	368	575	493
St. John*	1,892	2,373	2,699	4,062	5,807
	4,298	4,543	5,971	9,256	10,936
Rotherhithe*	1,700	1,868	3,268	7,010	8,514
<i>St. Saviour's Union—</i>					
St. Saviour*	3,301	3,729	10,020	9,010	9,748
Christchurch*	1,014	1,379	2,929	5,244	5,713
	4,315	5,108	12,949	14,254	15,461
<i>Wandsworth & Clapham U.</i>					
Wandsworth*	788	1,332	2,516	5,481	6,059
Clapham*	795	846	2,317	4,190	6,503
Putney	672	1,064	1,839	2,767	2,916
Streatham*	443	621	5,510	2,285	1,772
Tooting	169	403	751	1,107	1,262
Battersea*	581	773	1,630	2,272	4,360
	3,448	5,039	14,593	18,102	22,872
TOTAL	£22,019	27,765	69,956	150,168	182,964

TABLE D.

Relief of Poor in Metropolis.—Annual Value of Property Assessed to Property and '66; and Rate in Pound of Relief

Obs.—The average thus taken is different from the result of taking the whole Union as result is greater,

1 DIVISIONS AND UNIONS AND PARISHES.	2 Annual Value of Real Property Assessed to Property Tax in				3 Assessment to the County Rate in
	4 1815.	5 1843.	6 1855.	7 1857.	8 1855.
I. KENTISH PORTION.	£	£	£	£	£
<i>Greenwich Union—</i>					
Greenwich	46,738	123,216	158,509	162,339	110,350
Deptford, St. Paul	22,746	68,527	84,579	99,769	52,390
" St. Nicholas..	14,704	39,004	20,469	20,500	15,000
Woolwich	31,500	65,815	90,050	88,669	71,200
	115,688	296,562	353,607	371,277	248,940
<i>Lewisham Union—</i>					
Charlton	5,652	20,509	29,220	33,097	22,060
Eltham	11,553	16,561	17,848	18,097	13,700
Kidbrooke	2,028	7,138	9,036	9,871	15,840
Lee	5,986	16,209	29,432	31,646	5,220
Lewisham	27,007	76,365	103,514	119,966	75,000
Mottingham	1,622	2,124	....	....	....
Plumstead	12,073	14,161	33,436	39,011	18,500
	65,921	153,067	222,486	251,688	150,320
TOTALS	181,609	449,629	576,093	622,965	399,260
II. MIDDLESEX, WESTN.					
<i>Fulham Union—</i>					
Fulham	28,551	48,807	56,145	59,713	47,492
Hammersmith	30,349	66,715	78,969	85,078	67,500
	58,900	115,522	135,114	144,791	114,992
Chelsea	93,617	171,208	216,693	264,809	216,693
Kensington	63,686	170,442	319,429	361,849	242,287
Paddington	24,712	584,152	534,736	642,345	430,000
St. George, Hanover Sqr.	466,799	912,731	1,097,580	1,080,555	893,977
St. Marg. and St. John ..	142,387	275,809	316,859	337,706	255,000
St. Martin-in-the-Fields...	155,423	297,785	245,396	284,360	250,000
St. James, Westminster ...	275,479	480,746	494,660	491,220	411,399
Marylebone	509,244	1,087,783	1,168,657	1,128,310	999,375
Hampstead	37,421	66,574	100,801	121,328	77,025
TOTALS	1,827,668	4,162,752	4,629,925	4,857,473	3,890,748

Cols. 2, 3, 8, 12, from Parl. Ret., 509/54; Col. 4, Parl. Ret., 254/55; Col. 5, Parl. 7 and 11, Parl. Ret. 735/48;

Tax in 1815, '43, and '55; to County Rate in 1855; to Poor Rate in 1847, '52, to Poor in 1803, '47, '52, and '57.

one parish and dividing the expenditure among the total rateable value. Sometimes the sometimes it is less.

7			8		9		10		11		12		13	
Rateable Annual Value Assessed to Poor Rate in					Rate in the Pound for the Relief of the Poor in									
1847.	1852.	1857.	1803.	1847.	1852.	1857.								
£	£	£	s. d.	s. d.	s. d.	s. d.								
109,000	119,897	129,629	5 -	1 4½	1 4½	1 11½								
73,364	82,900	101,347	3 10	1 9½	1 8½	1 9½								
11,488	11,983	12,092	6 -	4 8½	5 -½	6 3½								
49,032	57,276	63,532	4 6	2 9½	2 7	2 6½								
242,884	272,056	306,600	4 10	1 11½	1 10½	3 2								
18,089	24,342	28,770	2 4	- 6½	- 5	- 7½								
13,566	13,955	15,117	4 8	1 2½	1 3½	1 6½								
1,657	5,379	9,029	1 6	- 1½	- -½	- 3½								
12,475	16,490	22,313	4 -	- 11½	- 4½	- 7½								
72,853	90,450	121,283	4 6	- 10½	- 8	- 9½								
1,566	1,566	....	6 -	- 10	- 5½	....							
10,780	23,071	30,972	2 4	1 8½	- 10½	- 10½								
130,986	175,253	226,484	3 7½	- 10½	- 7½	- 7½								
373,870	447,309	533,084	4 2½	1 5	1 3½	1 11½								
40,500	43,828	51,891	2 6	1 11½	2 6	2 10½								
56,354	66,751	78,362	3 6	1 7½	2 -½	2 2½								
96,854	110,579	139,253	3 -	1 9½	2 2	2 6								
147,932	176,448	207,938	2 11	1 10½	1 10½	1 10½								
167,876	226,000	287,655	2 11	1 3½	- 11½	1 1½								
253,461	390,732	496,634	3 3	- 4½	- 4½	- 5½								
661,582	694,380	754,938	4 -	- 7½	- 5	- 6½								
212,396	231,421	283,686	4 1½	1 3½	1 2½	1 8								
249,555	249,290	249,853	2 -	1 -½	1 2½	1 5½								
296,949	412,823	429,909	3 3	1 -	- 7½	- 10½								
840,216	861,485	910,252	2 3	1 2½	1 1½	1 3								
52,760	72,120	101,762	4 2	1 1½	1 1	1 2								
2,979,581	3,425,278	3,852,880	3 2½	1 2	1 1½	1 3½								

Ret. 291/58; Col. 6, from Parl. Ret., 149/58; Cols. 9, 13, Parl. Ret., 208/58; Cols. Col. 10, Parl. Rep. 1803.

TABLE D.—*Continued.*

1	2	3	4	5	6
DIVISIONS AND UNIONS AND PARISHES.	Annual Value of Real Property Assessed to Property Tax in				Assessment to the County Rate in
	1815.	1843.	1855.	1857.	1855.
	£	£	£	£	£
III. MIDDLESEX., CENTRAL.					
St. Pancras	238,661	1,247,479	806,774	1,018,310	706,387
Islington	103,457	323,773	549,773	640,872	437,000
<i>Holborn Union—</i>					
St. Andrew, Holborn ...	153,524	182,749	180,372	189,358	132,000
Saffron Hill, &c. ....	....	....	....	....	29,924
St. Sepulchre, Middlx...	21,201	22,281	20,422	19,305	17,750
	174,725	205,030	200,794	208,663	179,674
St. Giles, and Bloomsbury	260,241	306,439	306,585	297,749	262,275
<i>Strand Union—</i>					
St. Mary-le-Strand.....	96,665	208,996	119,007	116,604	14,860
St. Clement Danes					84,945
Savoy					8,560
St. Anne, Sobo	74,962	103,534	104,730	102,954	90,675
St. Paul, Covent Garden	42,488	51,664	41,883	48,036	43,418
Liberty of the Rolls	10,265	13,510	*	15,013	16,079
	224,380	377,704	265,620	282,607	258,537
Clerkenwell	98,300	303,090	327,005	246,207	215,170
City of London Union ...	731,296	1,134,269	1,066,348	1,252,617	....
<i>West London Union—</i>					
St. Andrew, Lower Lib.	29,908	36,316	}	....	....
St. Bartholomew the Gt.	14,549	15,596			
" the Less	....	....	
St. Bride	41,014	91,953			
Bridewell Precinct	7,046	7,195			
St. Dunstan-in-the-West	20,274	33,273			
St. Sepulchre, London...	41,128	42,565			
	153,919	226,898	213,311	250,695	....
St. Luke	138,356	201,066	203,603	204,345	163,300
TOTALS	2,123,335	4,325,748	3,939,813	4,402,065	....

* Included with St. Andrew, Holborn.

Value of Property and Rate in the Pound, 1803—1857.

7

8

9

10

11

12

13

Rateable Annual Value Assessed to Poor Rate in			Rate in the Pound for the Relief of the Poor in			
1847.	1852.	1857.	1803.	1847.	1852.	1857.
£	£	£	s. d.	s. d.	s. d.	s. d.
572,731	678,000	758,920	1 6	1 ½	1 1½	1 4½
287,518	372,381	513,633	3 7	— 11	— 8½	— 10
105,420	120,807	121,905	2 ½	1 7	1 5½	1 10
25,352	27,296	27,288	3 —	1 11½	1 10½	2 6
13,896	14,521	14,680	6 —	3 1½	2 2½	2 7
144,668	462,624	163,873	3 8	1 9½	1 10	2 4
232,005	248,517	247,972	2 9	1 5	1 ½	1 3
12,385	12,299	13,427	2 —	1 5½	1 5½	1 9½
78,982	79,147	80,327	2 9	1 6	1 7	2 4½
5,740	5,980	6,250	3 3	— 4½	— 2½	— 3½
67,683	68,202	92,105	1 10	1 4	1 4	1 4½
41,092	42,206	39,291	2 —	— 8½	— 8	— 11½
14,032	14,183	13,928	4 11	1 5½	1 7	2 2
219,914	222,017	245,328	2 9	1 3½	1 3½	1 6
183,943	189,779	196,503	4 2	1 6½	1 2½	1 6½
667,943	685,014	747,459	3 2	1 6	1 3½	1 3½
25,170	23,463	23,501	dis.	2 9½	3 1½	4 ½
11,394	9,028	8,962	4 9	2 3½	3 2	4 2
1,581	1,453	1,425	3 2½	2 6½	2 8½	3 ½
25,890	28,682	28,675	6 3	1 10½	3 1½	3 5½
6,863	6,098	6,072	5 —	— 8½	— 10½	1 ½
34,084	25,207	25,805	3 —	1 ½	1 5½	1 8½
39,947	30,679	28,087	4 6	2 8	3 1	4 5
144,929	124,610	122,527	4 5	2 ½	2 7	3 1½
135,688	143,088	162,461	4 4	2 2½	1 8½	2 2½
2,558,925	2,826,030	3,158,676	3 4½	1 6½	1 5	1 8½

TABLE D.—Continued.

1	2	3	4	5	6
DIVISIONS AND UNIONS AND PARISHES.	Annual Value of Real Property Assessed to Property Tax in				Assessment to the County Rate in
	1815.	1843.	1855.	1857.	1855.
	£	£	£	£	£
IV. MIDDSEX., EASTERN.					
<i>East London Union—</i>					
St. Botolph wt., Aldg.....	44,593	172,135	....	....	....
" Bahpsg.....	48,252	66,958			
" Aldrag.....	22,265	30,719			
St. Giles, Cripplegate....	43,001	54,287			
	158,111	324,099	304,692	357,866	....
Shoreditch	139,868	338,548	331,450	255,425	251,550
Bethnal Green	69,722	110,247	128,927	129,623	104,422
<i>Hackney Union—</i>					
Hackney	92,674	172,296	241,763	265,572	231,893
Stoke Newington	12,429	27,835	....	39,855	26,812
	105,103	200,131	241,763	305,427	258,705
<i>Whitechapel Union—</i>					
St. Mary, Whitechapel..	99,354	107,183	116,130	115,386	104,150
Norton Folgate	8,437	29,071	21,366	19,597	7,753
Old Artillery Ground	5,599	5,752	5,264	4,520	....
Christch., Spitalfields....	37,695	37,293	38,030	38,225	35,070
Mile End, New Town	10,761	11,103	14,616	13,822	14,160
Old Tower of London....	3,367	3,977	3,165	4,246	....
St. Botolph, Ald., witht.	24,304	34,975	33,883	33,680	44,967
St. Kath.-by-the-Tower	10,158	17,555	19,234	18,498	15,600
Trinity, Minorities	6,442	6,393	2,664	2,488	....
	206,117	253,302	254,352	250,462	221,700
St. George-in-the-East ...	131,074	190,414	105,469	101,085	163,214
<i>Stepney Union—</i>					
Limehouse	31,040	58,905	69,277	70,041	55,477
Shadwell	22,764	32,351	32,976	26,724	30,810
Mile End, Old Town	61,649	131,028	190,282	176,363	150,350
Ratcliffe	21,985	50,522	46,696	46,048	43,875
Wapping	23,495	30,192	17,968	17,828	34,234
	160,933	302,998	357,199	337,004	314,746
<i>Poplar Union—</i>					
Poplar	99,014	194,290	118,996	205,494	154,927
Bromley	17,886	25,960	59,446	59,985	35,270
Stratford-le-Bow	10,771	53,755	66,892	23,904	27,066
	£127,671	274,005	245,334	289,383	217,263
TOTALS	1,098,599	1,993,744	1,969,186	2,026,275	....

Value of Property and Rate in the Pound, 1803—1857.

7

8

9

10

11

12

13

Rateable Annual Value Assessed to
Poor Rate in

Rate in the Pound for the Relief of the Poor in

1847.	1852.	1857.	1803.	1847.	1852.	1857.
£	£	£	s. d.	s. d.	s. d.	s. d.
<div> <div> 36,881 39,521 24,936 37,700 </div> <div> 40,852 39,503 25,147 37,984 </div> <div> 42,215 39,096 25,154 38,768 </div> </div>			<div> dis. dis. 3 4 6 3 </div>	<div> 1 7½ 3 2½ 1 7½ 2 8½ </div>	<div> 2 1 3 4½ 1 9 2 8½ </div>	<div> 2 8 4 9½ 2 4½ 3 10 </div>
139,038	143,486	145,233	4 9½	2 6½	2 6	3 5
<div> 211,251 96,816 </div>	<div> 229,552 130,159 </div>	<div> 251,609 151,834 </div>	<div> 2 9 dis. </div>	<div> 2 ¾ 2 ¾ </div>	<div> 2 ½ 1 10½ </div>	<div> 2 10½ 2 10½ </div>
<div> 174,727 23,280 </div>	<div> 206,497 24,896 </div>	<div> 259,915 39,457 </div>	<div> 3 11 4 3 </div>	<div> 1 3 1 1½ </div>	<div> - 11½ - 11½ </div>	<div> 1 2½ - 10½ </div>
198,007	231,393	299,372	4 1	1 2½	- 11½	1 ½
<div> 93,572 6,646 3,898 31,276 10,663 2,689 33,978 16,000 2,347 </div>	<div> 111,425 6,779 4,203 34,999 13,812 2,749 31,103 16,746 3,270 </div>	<div> 112,539 7,632 4,002 37,020 14,170 2,783 33,791 15,746 5,948 </div>	<div> 4 1½ 4 10½ 3 9 3 4 4 - 1, 9 </div>	<div> 1 11 1 2½ 1 6½ 2 11½ 2 9 - 3½ 1 1½ - 1 1 11½ </div>	<div> 1 7½ 1 1 1 1½ 2 6½ 1 9½ - 4½ 1 1½ - 7½ 1 ½ </div>	<div> 2 6 1 10 1 9½ 4 ¼ 3 ¾ - 8½ 1 5½ - 11 - 6½ </div>
201,069	224,086	233,631	3 7½	1 10	1 6½	1 10½
143,383	153,297	160,437	3 9	2 3½	1 11	3 4½
<div> 42,928 21,276 119,297 31,250 27,023 </div>	<div> 48,111 25,085 135,948 36,710 32,384 </div>	<div> 58,517 27,299 164,409 39,867 32,416 </div>	<div> 4 10 5 9 4 6½ 4 6 2 9 </div>	<div> 2 1½ 3 7 1 7 2 4 1 6½ </div>	<div> 2 3 2 9½ 1 5½ 2 3½ 1 3½ </div>	<div> 2 8½ 3 9 1 8½ 3 2½ 1 5½ </div>
241,774	278,238	322,508	4 5½	1 11½	1 9½	2 7
<div> 132,076 20,728 21,176 </div>	<div> 148,366 34,225 25,331 </div>	<div> 172,167 54,970 30,291 </div>	<div> 3 4 4 6 6 - </div>	<div> 1 4½ 2 3 1 6½ </div>	<div> 1 2½ 1 3½ 1 2½ </div>	<div> 1 10½ 1 6½ 2 2 </div>
173,980	207,922	257,428	4 7	1 6½	1 3	1 10½
1,405,318	1,598,133	1,822,052	3 5½	2 1	1 9	2 9

TABLE D.—*Continued.*

1	2	3	4	5	6
DIVISIONS AND UNIONS AND PARISHES.	Annual Value of Real Property Assessed to Property Tax in				Assessment to the County Rate in
	1815.	1843.	1855.	1857.	1855.
V. SURREY PORTION.	£	£	£	£	£
Bermondsey	17,169	65,131	128,014	137,555	110,258
Camberwell	84,392	209,641	256,138	287,112	181,740
St. George-the-Martyr	95,374	161,652	174,956	154,399	113,004
Lambeth	220,618	551,953	664,226	655,647	467,130
St. Mary, Newington	84,223	207,746	249,858	253,778	165,844
<i>St. Olave Union—</i>					
St. Olave	32,914	89,828	47,566	47,527	48,510
St. Thomas	2,880	4,683	4,688	4,556	4,506
St. John	35,767	41,223	43,228	43,067	37,587
	71,561	135,734	95,482	95,150	90,603
Rotherhithe	51,621	76,114	88,228	91,699	54,322
<i>St. Saviour's Union—</i>					
St. Saviour	60,472	119,334	119,294	106,129	82,912
Christchurch	56,960	70,476	71,851	71,126	58,003
	117,432	189,810	191,145	177,255	140,915
<i>Wandsworth & Clapham U.</i>					
Wandsworth	25,544	35,680	47,347	54,440	33,664
Clapham	29,223	72,124	102,492	95,167	72,167
Putney	21,160	32,816	38,682	42,089	28,052
Streatham	25,277	41,606	54,884	56,551	43,414
Tooting Graveney	6,896	9,829	11,026	10,099	8,110
Battersea	33,060	189,816	99,912	97,954	49,166
	141,160	381,871	354,343	356,300	234,573
TOTALS	883,550	1,979,652	2,202,390	2,208,895	1,558,389

Summary.

Kentish Portion	181,609	449,629	576,093	622,965	399,260
Middlesex, Central	1,827,668	4,162,752	4,629,925	4,857,273	3,890,748
" Western	2,123,335	4,325,748	3,939,813	4,402,065	....
" Eastern	1,098,599	1,993,744	1,969,186	2,026,275	....
Surrey Portion	883,550	1,979,652	2,202,390	2,208,895	1,558,389
TOTALS	6,114,761	12,911,525	13,317,407	14,117,473	....

Value of Property and Rate in the Pound, 1803—1857.

7

8

9

10

11

12

13

Rateable Annual Value Assessed to
Poor Rate in

Rate in the Pound for the Relief of the Poor in

1847.

1852.

1857.

1803.

1847.

1852.

1857.

£

£

£

s. d.

s. d.

s. d.

s. d.

112,646

128,309

136,454

5 5

2 5½

1 9½

2 5

184,742

209,680

231,257

2 10

— 11½

— 11½

1 4½

109,161

117,056

120,900

2 10

2 8½

2 2

2 9½

438,220

524,036

500,289

5 —

1 7½

1 3½

1 10½

148,164

175,307

199,712

4 6½

2 5½

1 10½

2 —

46,613

53,483

54,355

4 —

1 4½

1 1½

1 7½

4,329

4,337

4,662

5 6

1 7½

1 9½

1 9½

31,399

32,264

35,593

2 6

2 3½

2 2½

2 8½

82,341

90,084

94,610

4 —

1 9

1 6½

2 —½

54,704

55,897

73,767

4 6

2 7½

2 6

2 3½

70,195

73,330

74,691

12 6

2 3½

2 1

2 8

52,924

51,984

48,961

4 10½

1 8½

1 9½

2 4½

123,119

125,314

123,652

8 8½

2 —½

1 11½

2 6

34,005

35,514

42,694

6 —

2 8

2 6

3 —½

64,131

70,167

85,168

4 3

1 4½

1 3½

1 6½

26,481

28,052

34,906

4 11

1 8

1 7

1 8½

41,214

43,414

49,082

3 6

— 9½

— 9½

— 9½

8,175

8,110

8,318

4 1

2 1½

2 1½

3 3½

44,723

56,658

71,365

4 1

1 2½

— 11½

1 3

218,729

241,915

291,533

4 5½

1 5½

1 4½

1 11½

1,471,826

1,667,598

1,772,174

4 8½

2 —

1 8½

2 9

373,870

447,309

533,084

4 2½

1 5

1 3½

1 11½

2,979,581

3,425,278

3,852,880

3 2½

1 2

1 1½

1 3½

2,558,925

2,826,030

3,158,676

3 4½

1 6½

1 5

1 8½

1,405,318

1,598,133

1,822,052

3 5½

2 1

1 9

2 9

1,471,826

1,667,598

1,772,174

4 8½

2 —

1 8½

2 9

8,789,520

9,966,348

11,138,866

3 9½

1 7½

1 5½

2 1

TABLE E.

Further Information as to the ANNUAL VALUE of REAL PROPERTY in the Metropolis in 1857.

[From a Return made to the House of Commons (31/58) the following additional Information is obtained as to the Annual Value of Real Property, *including Railways and Canals* in the metropolis, assessed to the Property Tax in the Year ending 5th April, 1857.]

	£
1. BOROUGH OF GREENWICH	426,743
Including Greenwich Union, and nearly the whole of the parishes of Charlton and Plumstead, in the Lewisham Union.	
2. BOROUGH OF FINSBURY	1,904,039
Including St. Giles and Bloomsbury; Clerkenwell; Rolls Liberty; Saffron Hill, &c.; St. Luke; Islington; St. Sepulchre, Middlesex; St. Andrew, Holborn, and St. George-the-Martyr; the Charter House; Gray's Inn; Farnival's Inn; Lincoln's Inn; Staple Inn; and Stoke Newington.	
3. BOROUGH OF MARYLEBONE	5,917,069
Including Marylebone; St. Pancras; and Paddington.	
4. BOROUGH OF THE TOWER HAMLETS	2,215,809
Including Shoreditch; Bethnal Green; Whitechapel Union; St. George-in-the-East; Stepney Union; Poplar Union; and Hackney Parish.	
5. CITY OF LONDON.....	2,090,779
Including the City of London Union; East and West London Unions; and Middle and Inner Temples.	
6. CITY OF WESTMINSTER	2,620,594
Including St. Margaret and St. John; St. Martin-in-the-Fields; St. George, Hanover-Square; St. James; and the Strand Union, exclusive of the Rolls Liberty, with New Inn.	
7. BOROUGH OF SOUTHWARK.....	1,535,402
Including St. Saviour's Union; St. Olave's Union; St. George-the-Martyr; Bermondsey; and Rotherhithe.	
8. BOROUGH OF LAMBETH	1,647,144
Including Lambeth (part of); Camberwell (part of); and Newington.	
Total.....	<u>£18,357,579</u>

It is open to question whether this Return, which leaves out a considerable portion of the metropolis, does not include the *whole* of the tax paid by Railway and Canal Companies at their head offices in London, on the whole amount of Real Property represented by the lines of Railways and Canals through their entire lengths, and situated, therefore, not merely in the Metropolitan Counties, but in all the Counties and places into which the lines of Railways or Canals may extend.

TABLE F.

METROPOLIS POOR RELIEF.—*Numbers of PAUPERS RELIEVED in 1803; on the 1st July, 1857; and on the 1st Jan., 1858.*

[Taken from the Parl. Rep. in 1803, and from the Reports of the Poor Law Board.]

1	2	3	4	5	6	7	8
PARISHES AND UNIONS.	Number of Paupers in 1803.	Number Relieved 1 July, 1857.			Number Relieved 1st Jan., 1858.		
		Indoor.	Outdoor	TOTAL.	Indoor.	Outdoor	TOTAL.
I. KENTISH PORTION.	No.	No.	No.	No.	No.	No.	No.
<i>Greenwich Union—</i>							
Greenwich	2,108						
Deptford, St. Nicholas	493						
„ St. Paul ...	164						
Woolwich	844						
	3,099	1,180	3,547	4,677	1,254	3,905	5,159
<i>Lewisham Union—</i>							
Lewisham	396						
Charlton	27						
Eltham	164						
Mottingham	25						
Kidbrooke .....	..					
Lee	30						
Plumstead	70						
	702	276	777	1,053	281	881	1,162
TOTAL	3,801	1,406	4,324	5,730	1,535	4,786	6,321
II. MIDDLE. WESTN.							
<i>Fulham Union—</i>							
Fulham	284						
Hammersmith	428						
	707	345	1,800	1,645	386	2,023	2,409
Kensington	604	393	863	1,356	490	1,022	1,512
Paddington	121	249	519	768	287	608	895
Chelsea	2,769	592	1,529	2,121	705	1,653	2,358
St. George, Hanover Sq	2,648	513	718	1,231	587	861	1,448
St. Marg. and St. John..	5,632	546	1,877	2,423	707	2,377	3,084
St. Martin-in-the-Fields.	3,900	681	416	1,097	664	813	977
St. James, Westminster..	2,399	688	540	1,228	785	725	1,510
Marylebone	3,178	1,696	3,953	5,649	2,013	5,261	7,274
Hampstead	415	187	171	308	143	269	411
TOTAL	22,263	5,840	11,886	17,726	6,766	15,112	21,878
III. MIDDLE. CENTRAL							
St. Pancras	2,546	1,342	3,131	4,473	1,655	3,709	5,364
Islington	1,309	448	1,414	1,802	729	1,567	2,296
<i>Holborn Union—</i>							
St. Andrew & St. Geo.	677						
Saffron Hill, &c.	380						
St. Sepulchre, Middlx.	471						
	1,528	670	1,102	1,772	725	1,194	1,919
St. Giles and Bloomsbury	1,407	716	838	1,554	934	1,084	2,018
Carried Forw.	6,690	3,176	6,485	9,601	4,043	7,584	11,597

TABLE F.—Continued.

1	2	3	4	5	6	7	8
PARISHES AND UNIONS.	Number of Paupers in 1803.	Number Relieved 1st July, 1857.			Number Relieved 1st Jan., 1858.		
		Indoor.	Outdoor	TOTAL.	Indoor.	Outdoor	TOTAL.
Brt. Frwd.	No. 6,690	No. 3,176	No. 6,485	No. 9,661	No. 4,048	No. 7,354	No. 11,597
<i>Strand Union—</i>							
St. Mary-le Strand ...	316						
St. Anne, Soho	513						
St. John, Savoy	145						
St. Paul, Covent Gard.	278						
St. Clement Dance ...	626						
Liberty of the Rolls ..	124						
	2,002	645	1,303	1,948	712	1,515	2,227
Clerkenwell	1,789	605	1,214	1,819	666	1,277	1,943
City of London Union ..	7,235	1,090	2,745	3,835	1,253	2,655	3,908
<i>West London Union—</i>							
St. Bride	436						
St. Bartholomew Grt.	145						
Less	88						
St. Sepulchre, London	260						
Bridewell Precincts ..	52						
St. Andrew, London ..	278						
St. Dunstan, West ...	174						
	1,383	623	1,638	2,261	661	1,749	2,410
St. Luke	2,745	572	999	1,571	674	1,021	1,695
TOTAL	21,784	6,711	14,384	21,095	8,009	15,771	23,780
IV. MIDDLEX., EASTERN.							
<i>East London Union—</i>							
St. Botolph, Aldgate ..	461						
" Burgate ..	619						
" Aldersg. ..	260						
St. Giles, Cripplegate	762						
	2,102	765	1,949	2,714	890	1,744	2,634
Shoreditch	1,266	1,012	3,297	4,309	1,128	3,307	4,526
Bethnal Green	494	961	626	1,587	1,117	1,153	2,270
<i>Hackney Union—</i>							
Hackney	627						
Stoke Newington	84						
	611	543	1,509	2,062	604	2,470	3,074
<i>Whitechapel Union—</i>							
St. Mary Whitechapel	615						
Norton Folgate	134						
Old Artillery Ground	100						
Christchurch, Spitalf.	2,441						
Mile End New Town	389						
Old Tower of London	36						
St. Botolph, Aldgate ..	276						
St. Kath-by-the-Twr. ..	161						
Trinity, Minories	79						
	4,221	957	1,959	2,916	1,044	2,233	3,267
St. George-in-the-East ..	675	1,041	2,133	3,174	1,149	2,052	3,201
Carried Frwd.	9,369	5,279	11,473	16,752	5,932	13,039	18,971

Paupers Relieved 1803: '57 and '58.

I PARISHES AND UNIONS.	2 Number of Paupers in 1803.	3 Number Relieved 1st July, 1857.			6 Number Relieved 1st Jan., 1858.		
		4 Indoor.			7 Outdoor.		
		5 TOTAL.			8 TOTAL.		
	No.	No.	No.	No.	No.	No.	No.
Brt. Frwd.	9,369	5,279	11,478	16,762	5,932	19,039	18,971
<i>Stepney Union—</i>							
Limehouse	245						
Mile End Old Town ..	612						
Ratcliffe	1,890						
Wapping	352						
Shadwell	315						
	3,414	1,419	3,904	5,323	1,624	4,219	5,843
<i>Poplar Union—</i>							
Poplar	225						
Bromley	127						
Bow	108						
	450	622	2,183	2,755	657	2,217	2,874
TOTAL	13,283	7,320	17,610	24,830	8,213	19,476	27,688
V, SURREY PORTION.							
Bermondsey	2,002	580	967	1,547	666	1,066	1,781
Camberwell	402	872	1,140	1,512	487	1,667	2,064
St. George, Southwark ..	873	727	1,646	2,378	774	2,499	3,278
Lambeth	2,862	1,243	6,125	7,368	1,559	6,978	8,537
Newington, St. Mary ...	3,594	452	1,271	1,723	806	1,397	2,203
<i>St. Olave Union—</i>							
St. Olave	364						
St. Thomas	84						
St. John	294						
	742	344	737	1,081	368	847	1,235
Rotherhithe	469	181	789	970	273	802	1,076
<i>St. Saviour's Union—</i>							
St. Saviour	648						
Christchurch	431						
	6,079	484	1,182	1,616	574	1,083	1,607
<i>Wandsworth & Clapham U.</i>							
Wandsworth	206						
Clapham	226						
Putney	316						
Streatham	469						
Tooting Graveney ...	79						
Battersea	166						
	1,462	560	1,795	2,355	648	2,192	2,840
TOTAL	17,985	4,943	15,602	20,545	6,175	18,380	24,555

Summary.

Kentish Portion	3,801	1,406	4,324	5,780	1,535	4,786	6,321
Middlesex, Western	22,263	5,840	11,886	17,726	6,766	16,112	21,878
" Central	21,784	6,711	14,384	21,095	8,009	15,771	23,780
" Eastern	13,233	7,320	17,610	24,830	8,213	19,476	27,688
Surrey Portion	17,985	4,943	15,602	20,545	6,175	18,380	24,555
Total	79,066	26,220	63,706	89,926	30,698	73,624	104,222

TABLE G.

CITY OF LONDON UNION.—*Extent in ACRES of the several Parishes.—POPULATION 1783-4-5, 1834, 1856.—Annual VALUE ASSESSED to Poor Rate*

In the Cols. headed "Expenditure the Shillings and Pence have been omitted, and hence the Totals

	1	2	3	4	5	6	7
CITY PARISHES.	Extent in Acres.	Population in 1851.	Number of Inhabited Houses in 1851.	Expenditure in			
				1776.	1783-4-5.	1803.	
Alldhallows, Bread street ...	1.5	261	48	£ 189	£ 203	£ 237	
" Honey-lane	1.1	150	24	78	114	168	
" Lombard-street ..	2.7	456	75	593	610	633	
" London-wall ...	8.1	2,070	230	516	401	1,071	
" Barking	16.0	2,001	237	704	810	1,377	
" Staining	4.	512	99	488	431	521	
" the Great	11.	700	76	278	329	489	
" the Less	5.	130	18	211	176	290	
Christchurch, Newgate-st ..	12.8	2,541	215	602	711	1,650	
Holy Trinity-the Less ...	3.5	691	59	148	186	244	
St. Alban, Wood street	3.8	424	61	388	426	625	
St. Alphage, London-wall ..	3.5	919	107	297	206	426	
St. Andrew-by the-Wardrobe	11.7	680	79	206	224	336	
" Hubbard	10.5	342	47	281	286	239	
" under-Shaft with } St. Mary Axe	9.2	1,181	162	738	803	910	
St. Anne, Blackfriars	18.4	3,029	282	687	659	1,064	
" and St. Agnes ...	2.8	459	54	237	278	462	
St. Antholin	2.2	305	54	285	256	300	
St. Augustine	1.8	273	33	165	55	349	
St. Bartholomew, Exchange	3.8	264	56	510	661	934	
St. Benet, Gracechurch-st. ...	2.2	294	45	287	295	510	
" Paul's-wharf	9.	663	81	372	172	448	
" Fink	2.8	314	66	271	266	318	
" Sherehog	1.	144	27	102	90	116	
St. Botolph, Billingsgate ...	4.5	341	33	160	113	118	
St. Christopher-le-Stock	2.8	45	1	260	238	361	
St. Clement	1.8	233	40	240	135	269	
St. Dionis Backchurch	3.	746	114	442	514	602	
St. Dunstan-in-the-East	16.7	1,025	177	828	1,123	1,620	
St. Edmund-the-King	3.	440	62	356	480	637	
St. Ethelburga	3.	693	91	228	250	395	
St. Faith-the-Virgin	5.2	853	125	412	630	763	
St. Gabriel	2.8	274	57	275	471	589	
St. George	1.	225	24	132	100	176	
St. Gregory	11.7	1,428	174	813	763	1,066	
St. Helen	8.7	674	106	305	492	623	
St. James, Duke's-place	3.2	827	108	224	250	338	
" Garlick Hythe ..	3.2	627	66	271	353	637	
St. John Baptist	2.	249	40	146	136	354	
" Evangelist .....	.8	99	13	58	129	78	
" Zachary	2.2	156	26	317	261	202	
St. Katharine Coleman	6.5	547	98	488	442	802	
" Creechurch	7.4	1,905	233	673	869	1,137	
St. Lawrence Jewry	5.5	526	83	500	646	1,300	
" Pountney	3.8	314	40	256	277	364	
St. Leonard, Eastcheap	1.5	152	27	260	160	325	
" Foster-lane ...	2.5	305	45	395	234	321	
St. Magnus	6.	300	31	457	305	559	
St. Margaret, Lothbury	3.7	191	39	513	493	569	
" New Fish-st. ...	1.8	305	45	279	217	492	
Carried Fwd.	266.7	32,363	4,127	17,918	18,719	28,503	

and INHABITED HOUSES in 1851.—EXPENDITURE on Relief of the Poor in 1776, 1847, 1852, 1857;—and RATE in the Pound 1803, '47, '52, and '57.

differ slightly from those given in the former Tables. For the authorities refer to the previous Tables.

		8	9	10	11	12	13	14	15	16	
		Annual Value Assessed to the Poor Rate in the Years ending Lady-Day					Rate in the Pound				
		1834.	1856.	1852.	1847.	1857.	1808.	1847.	1852.	1857.	
		£	£	£	£	£	s. d.	s. d.	s. d.	s. d.	
		345	450	5,405	5,265	5,519	2 -	1 6	1 -	1 6	
		172	148	2,395	2,395	2,395	1 9	1 6	1 4	1 1	
		703	736	9,318	7,499	10,113	2 6	2 -	1 5	1 6	
		1,592	1,750	10,404	10,401	10,547	3 6	2 2	2 3	2 10	
		2,021	1,956	12,776	19,855	13,878	dis.*	1 8	2 4	2 9	
		914	584	8,074	8,155	8,544	dis.	1 5	1 1	1 3	
		576	864	9,096	9,049	10,030	2 6	1 9	1 6	1 9	
		365	70	4,076	4,076	5,122	dis.	- 7	- 6	- 2	
		2,382	1,699	13,993	10,914	14,191	5 -	2 8	2 -	1 11	
		461	506	2,461	2,495	2,760	4 8	3 11	4 3	3 9	
		683	632	6,099	5,689	6,392	3 9	2 1	1 8	1 7	
		872	512	3,744	3,527	4,405	5 -	4 -	3 3	2 4	
		1,179	628	7,311	7,198	8,119	1 6	1 6	1 6	1 5	
		287	324	4,390	4,341	4,320	dis.	1 5	1 3	1 6	
		796	559	16,149	16,400	16,143	dis.	1 1	- 8	- 7	
		1,748	2,673	12,125	13,478	12,249	2 8	2 10	3 -	3 9	
		558	359	2,850	3,383	2,835	4 -	1 8	2 -	2 6	
		410	302	5,066	5,074	5,813	3 -	1 1	- 11	- 9	
		235	417	3,756	3,432	4,225	1 9	2 3	2 4	1 11	
		720	348	16,520	16,135	18,660	- 6	- 8	- 5	- 4	
		271	399	5,551	5,440	5,851	4 -	1 5	1 -	- 11	
		444	890	4,926	4,700	6,708	2 9	2 7	2 7	2 4	
		720	565	8,063	6,574	11,912	2 -	1 7	1 1	- 10	
		110	167	2,312	2,312	2,312	1 6	1 2	1 1	1 8	
		231	162	4,890	4,889	5,008	dis.	- 9	- 8	- 9	
		265	71	9,600	3,027	9,600	dis.	- 8	- 11	- 1	
		339	148	3,613	3,578	4,661	1 10	1 7	- 11	- 6	
		910	842	9,335	8,422	10,700	dis.	2 1	1 7	1 6	
		1,443	1,361	18,682	17,368	18,710	dis.	1 5	1 1	1 3	
		311	118	7,966	7,476	8,306	dis.	- 7	- 4	- 3	
		368	507	5,183	5,169	5,801	2 11	1 7	1 4	1 7	
		991	762	11,930	9,394	13,705	2 -	1 5	1 1	1 -	
		576	345	4,666	4,517	4,328	dis.	11 11	1 6	1 4	
		189	126	2,195	2,275	2,315	dis.	1 4	1 1	- 11	
		1,267	1,478	12,305	11,408	12,595	2 -	2 3	1 11	2 2	
		524	354	11,016	11,865	11,461	4 -	- 9	- 6	- 7	
		402	478	3,116	3,443	3,139	4 -	2 3	2 6	2 10	
		496	642	4,739	4,762	4,932	..	8 2	2 9	2 4	
		487	558	3,955	3,940	4,112	dis.	2 -	2 3	2 2	
		98	182	1,609	1,549	1,609	2 6	1 6	1 9	1 11	
		271	167	4,438	3,284	4,375	2 11	1 3	- 7	- 8	
		1,330	970	11,455	11,445	12,360	3 1	1 9	1 5	1 4	
		1,235	1,311	13,070	13,191	13,294	dis.	1 10	1 7	1 9	
		1,095	421	15,005	12,606	15,723	3 6	- 9	- 6	- 5	
		344	260	4,460	3,680	4,520	3 -	1 8	- 10	1 1	
		242	206	2,333	3,243	3,333	dis.	- 11	1 5	1 -	
		636	504	1,508	1,553	1,540	3 -	6 -	4 10	5 7	
		401	259	4,602	4,672	4,672	3 6	1 4	1 -	- 11	
		703	297	10,567	9,993	10,353	2 9	- 10	- 6	- 6	
		415	286	3,738	3,728	3,829	6 -	1 6	1 4	1 6	
		31,213	30,508	362,910	347,354	387,947	..	..	..	..

TABLE G.—*Continued.*—

1	2	3	4	5	6	7
CITY PARISHES.	Extent in Acres.	Population in 1851.	Number of Inhabited Houses in 1851.	Expenditure in		
				1776.	1783-4-5.	1803.
				£	£	£
Brt. Fwd.	256 7	32, 63	4,127	17,918	18,719	28,503
St. Margaret Moses	1·8	249	35	103	88	143
Pattens	1·8	169	28	149	93	259
St. Martin, Ludgate	4·5	1,246	131	342	347	469
Orgars	2·7	324	46	168	244	473
Outwich	3·5	174	37	221	250	605
Pomroy	3·8	181	19	236	130	99
Vintry	7·	300	42	156	266	534
St. Mary, Aldermanbury ...	4·5	687	86	374	373	653
Abchurch	2·	273	51	219	324	399
Aldermary	2·2	511	69	262	253	514
at-Hill .....	..	812	90	..	631	878
Bothaw	1·5	194	28	138	180	164
Colechurch	1·2	225	36	244	298	389
le-Bow	3·	363	53	402	400	450
Magdalen, Milk-st ..	1·2	193	42	+	+	+
Old Fish-st.	2·4	890	90	233	160	428
Mounthaw	1·	406	34	73	39	81
Somerset	6·8	394	42	169	215	324
Staining	1·	202	36	96	118	138
Woolchurch Haw ..	2·5	125	18	208	312	289
Woolnoth	2·2	328	47	301	426	276
St. Matthew	1·5	164	23	104	168	236
St. Michael, Cornhill	4·	491	90	473	675	679
Crooked-lane ..	5·	443	51	273	251	522
Queenhithe ...	6·7	761	67	363	317	377
Wood-street ...	2·2	286	33	262	172	488
Bassishaw	5·2	616	101	368	475	989
le-Quern	1·5	134	24	234	288	621
Paternoster Rl. ...	2·2	171	23	111	205	264
St. Mildred, Bread street ..	1·5	310	42	45	62	94
the-Virgin	2·	319	51	235	316	254
St. Nicholas Acons	1·5	221	33	366	224	258
Cole Abbey ...	1·5	379	33	180	141	268
Olave	1·5	633	43	171	136	307
St. Olave, Hart-street	11·	893	150	671	888	1,360
Jewry .....	..	177	33	227	119	339
Silver-street ...	3·2	948	126	349	196	689
St. Pancras	1·6	177	29	173	133	334
St. Peter, Cornhill	5·2	656	107	661	540	731
Paul's-wharf	4·7	333	46	182	202	411
le-Poor	8·8	562	117	506	726	1,126
Westcheap	1·6	209	41	175	212	298
St. Stephen, Coleman-street	27·	3,936	517	1,230	1,340	1,874
Walbrook	3·	312	55	71	95	526
St. Swithin	3·5	333	46	201	153	471
St. Thomas-the-Apostle	2·2	369	40	73	238	235
St. Vedast	2·8	410	60	447	421	513
Whitefriars	9·	1,230	123	300	348	456
	434·	55,332	7,297	30,632	32,446	51,168

* *Discretionary.*—In the printed Report of the Returns for 1803 this explanation is given as to occupiers to pay the assessment, as well as to the value of the premises occupied, so that a wealthy Where no area is given, the Parish is returned with some other.

City of London, 1776-1857.

		8	9	10	11	12	13	14	15	16
		Annual Value Assessed to the Poor Rate in the Years ending Lady-Day					Rate in the Pound			
		1834.	1836.	1837.	1847.	1857.	In 1808.	In 1847.	In 1852.	In 1857.
		£	£	£	£	£	s. d.	s. d.	s. d.	s. d.
		34,213	30,608	362,910	347,354	387,947				
		235	218	2,558	2,558	3,941	2 6	1 4½	1 8½	- 1½
		318	107	2,990	2,444	2,990	dis.	- 10½	- 8½	- 10½
		928	1,165	10,650	10,485	11,178	dis.	1 9½	1 8½	2 -
		576	178	4,882	4,882	6,364	1 6	- 10½	- 11½	- 6½
		294	164	6,800	6,800	10,438	dis.	- 7½	- 6	- 3½
		171	114	3,919	3,644	3,919	2 -	- 10½	- 8	- 10½
		448	537	6,572	6,107	6,282	dis.	1 6	1 10	1 6½
		554	536	9,615	9,525	9,861	dis.	1 6½	1 1½	1 -
		402	271	5,520	5,475	5,740	1 6	1 4½	1 2½	- 11½
		460	327	3,004	3,604	4,022	4 6	1 4½	- 10½	- 11½
		1,153	921	8,665	8,819	8,821	dis.	1 7½	1 9	2 1½
		297	183	3,191	3,232	7,669	dis.	- 11½	1 -	- 6½
		283	186	5,451	4,432	6,967	2 6	- 9	- 6½	- 6½
		685	495	5,808	5,785	5,808	3 -	1 8½	1 7½	1 6½
		+	265	4,550	4,550	4,974	..	..	1 -	1 -
		510	769	4,944	3,020	4,086	4 3	3 10½	2 6½	3 7½
		191	342	953	973	1,078	dis.	4 9½	5 7½	6 2½
		338	494	3,742	3,742	3,742	3 3	2 -	2 -	2 7½
		223	191	1,946	2,013	2,682	4 6	1 8½	1 6½	1 -
		294	241	7,781	7,780	7,781	dis.	1 -	- 6½	- 6½
		613	334	10,909	11,066	11,755	- 6	- 10½	- 7	- 7
		269	196	3,559	3,559	3,836	dis.	1 8½	1 -	1 -
		1,157	910	20,784	20,513	23,140	1 6	1 -	- 9½	- 9½
		796	315	7,039	7,271	7,497	dis.	1 2½	1 -	- 9½
		788	760	4,048	3,541	4,175	3 6	2 6½	1 10	4 2½
		550	352	8,996	7,703	9,210	6 -	1 1	- 9½	- 10
		1,143	417	10,958	11,218	10,928	dis.	- 10	- 9½	- 11
		432	216	4,816	4,611	5,262	3 -	1 1½	1 -	- 8½
		265	120	3,355	3,120	3,595	1 -	- 11½	- 6½	- 7½
		287	278	2,442	2,476	3,450	1 -	1 8½	1 8½	1 4½
		425	230	6,372	5,298	10,138	dis.	1 3	- 8½	- 6½
		229	218	6,629	6,629	6,760	2 6	- 8½	- 8	- 7½
		397	282	1,618	1,613	2,011	6 -	2 10½	3 1½	2 3½
		192	343	1,495	1,507	1,554	8 -	5 -	6 -	5 7½
		1,056	700	27,108	13,041	13,226	dis.	1 1½	- 6½	- 11½
		368	297	5,810	5,342	6,571	dis.	- 10½	1 -	- 8½
		488	735	3,374	3,203	3,224	5 -	4 4½	3 6½	..
		259	220	3,615	3,600	3,555	5 -	- 11½	1 2	1 2½
		1,684	903	17,626	14,556	21,508	dis.	1 3½	- 10½	- 6½
		457	260	3,186	3,226	3,189	4 6	1 10½	1 9	1 11½
		1,170	631	15,467	15,281	18,272	dis.	- 9½	- 8½	- 9½
		267	251	4,423	4,428	4,590	4 -	1 2½	1 -	1 -
		2,381	2,382	33,791	44,312	34,314	1 3	1 1½	1 4½	1 4½
		519	343	6,100	6,029	6,100	2 6	1 6½	1 2½	1 1
		501	324	4,391	4,285	5,097	2 -	1 8	1 3½	1 1½
		470	546	3,287	3,287	3,329	2 -	4 1½	2 11	2 -
		556	408	6,954	5,406	7,011	3 -	1 7½	1 -	1 -
		795	558	5,568	5,403	6,132	5 4	2 10½	2 6½	2 11
		61,675	51,935	685,014	617,533	747,549	8 1½	1 6	1 3½	1 8½

this word:—"The overseers explain this mode of imposing the rate with regard to the ability of the man is rated higher in the pound than one less able to pay a heavy assessment."

+ Returned this year with St. Lawrence Jewry.

TABLE H.

METROPOLITAN POOR RELIEF—Year ended Lady-day, 1857.—

[For this Table I am indebted to Mr. F. Purdy, Chief

1	2	3	4	5	6	7
Unions and Single Parishes under Boards of Guardians.	Estimated Population, (Persons) 1857.	Annual Value Assessed to the Poor Rate.		Difference Per Cent. between the Gross and the Net Value.	Total Poor's Rate Expended; Year ended Lady-day, 1857.	Rate Per Head on Population of Total Poor Rate Expenditure.
		Gross Estimated Rental.	Net Annual Value; (i.e. the sum on which the Rate is laid.)			
KENTISH PORTION.	No.	£	£	Per Cent.	£	s. d.
Greenwich Union	105,368	378,244	306,600	18·9	52,158	9 11
Lewisham „	36,919	271,758	228,100	16·1	21,510	11 8
Totals	142,287	650,002	534,700	17·7	73,668	10 4
MIDX. WESTERN.						
Fulham Union	31,422	205,507	130,253	36·6	21,960	14 —
Chelsea	59,928	324,601	207,938	35·9	28,955	9 8
Kensington	46,686	329,803	287,655	12·8	29,143	12 6
Paddington	49,068	593,560	494,634	16·7	32,584	13 3
St. George, Hanover Square	77,622	838,820	754,938	10·	65,749	16 11
St. Marg. & St. John, Westm.	69,545	312,055	283,686	9·1	36,029	10 4
St. Martin-in-the-Fields	26,027	328,776	249,853	24·	32,823	25 3
St. James, Westminster	38,590	488,293	429,909	12·	36,033	18 8
St. Marylebone	167,135	1,001,391	910,252	9·1	110,956	13 3
Hampstead	12,700	101,762	101,762	....	9,620	15 2
Totals	578,723	4,524,568	3,850,880	14·9	403,852	13 11
MIDX. CENTRAL.						
St. Pancras	177,224	898,945	809,051	10·	98,230	11 1
Islington	101,047	616,359	513,633	16·7	45,514	9 —
Holborn Union	49,417	196,646	163,813	16·7	24,993	10 1
St. Giles and St. George	57,466	247,972	247,972	....	28,499	9 11
Strand Union	47,110	296,777	245,335	17·3	33,504	14 3
Clerkenwell	68,660	258,426	196,503	24·	25,682	7 6
City of London Union	59,286	877,156	747,459	14·8	53,467	18 —
West London „	30,065	152,279	122,527	19·5	22,432	14 11
St. Luke	57,295	200,604	162,461	19·	25,924	9 1
Totals	647,570	3,745,164	3,208,754	14·3	358,245	11 1

Gross Rental:—Net ANNUAL Value:—POOR RATES and PAUPERISM.

Clark of the Statistical Department of the Poor Law Board.]

8		9	10	11	12	13	14	15	16
Rate in the Pound of Total Poor Rate Expenditure on the		Sum Expended for Relief to the Poor only; Year end-d Lady-day, 1857.	Rate in the Pound of Relief to the Poor only on the		Mean Number of Paupers Relieved at Midsummer and Christmas; Year ended Lady-day, 1857.	Ratio of Mean Number of Paupers per 1,000 of Population.	Cost of In-Mainte- nance and Out-relief only; Year ended Lady-day, 1857.	Average Cost for In-mainte- nance and Out-Relief only, of the Mean Number of Paupers Relieved.	
Gross Estimated Rental.	Net Annual Value.		Gross Estimated Rental.	Net Annual Value.					
s. d.	s. d.	£	s. d.	s. d.	No.	Per 1,000	£	£ s. d.	
2 9·1	3 4·8	33,624	1 9·3	2 2·3	4,636	44	23,746	5 2 5	
1 7·	1 10·6	9,085	— 8·	— 9·6	1,032	28	6,192	6 — —	
2 3·2	2 9·1	42,709	1 3·8	1 7·6	5,668	40	29,938	5 5 8	
2 1·6	3 4·5	15,986	1 6·7	2 5·5	1,944	62	10,159	5 4 6	
1 9·4	2 9·4	19,663	1 2·5	1 10·7	2,325	39	12,767	5 9 10	
1 9·2	2 0·3	15,997	— 11·6	1 1·3	1,645	35	10,136	6 3 3	
1 1·2	1 3·8	11,125	— 4·5	— 5·4	778	16	5,445	7 — —	
1 6·8	1 8·9	20,532	— 5·9	— 6·5	1,258	16	9,194	7 6 2	
2 3·7	2 6·5	23,551	1 6·1	1 7·9	3,328	48	12,221	3 13 5	
2 —	2 7·5	18,093	1 1·2	1 5·4	1,468	56	11,243	7 13 2	
1 5·7	1 8·1	18,587	— 9·1	— 10·4	1,460	38	10,218	7 — —	
2 2·6	2 5·3	56,778	1 1·6	1 3·	6,332	38	44,311	7 — —	
1 10·7	1 10·7	5,947	1 2·	1 2·	320	25	2,956	9 4 9	
1 9·4	2 1·2	206,259	— 10·9	1 —·8	20,858	36	128,650	6 3 4	
2 2·2	2 5·1	51,895	1 1·9	1 3·4	4,792	27	33,099	6 18 2	
1 5·7	1 9·3	21,289	— 8·3	— 9·9	1,989	20	11,024	5 10 10	
2 6·5	3 —·6	16,435	1 8·1	2 —·1	1,805	37	9,387	5 4 —	
2 3·6	2 3·6	15,542	1 3·	1 3·	1,694	29	10,542	6 4 6	
2 3·1	2 8·8	20,630	1 4·7	1 8·2	2,141	45	11,176	5 4 5	
1 11·8	2 7·4	14,877	1 1·8	1 6·2	1,946	28	9,922	5 2 —	
1 2·6	1 5·2	48,382	1 1·2	1 3·5	3,915	66	31,683	8 1 10	
2 11·4	3 7·9	20,495	2 8·3	3 4·1	2,770	92	14,241	5 2 10	
2 7·	3 2·3	18,032	1 9·6	2 2·6	1,513	26	13,033	8 12 3	
1 11·0	2 2·8	227,577	1 2·6	1 5·0	22,565	35	144,107	6 7 9	

TABLE H.—*Continued.*—

1	2	3	4	5	6	7
Unions and Single Parishes under Boards of Guardians.	Estimated Population, (Persons) 1857.	Annual Value Assessed to the Poor Rate.		Difference Per Cent. between the Gross and the Net Value.	Total Poor's Rate Expended; Year ended Lady-day, 1857.	Rate Per Head on Population of Total Poor Rate Expendi- ture.
		Gross Estimated Rental.	Net Annual Value; (i.e. the sum on which the rate is laid.)			
MID. EASTERN.	No.	£	£	Per Cent.	£	s. d.
East London Union	47,070	181,133	145,233	19·8	27,893	11 10
Shoreditch	115,761	435,558	251,609	42·2	49,346	8 6
Bethnal Green	95,599	271,551	151,834	44·1	29,014	6 1
Hackney Union	61,933	349,726	299,372	14·4	32,495	10 6
Whitechapel „	84,538	316,203	233,631	26·1	41,079	9 9
Stepney „	117,305	403,609	322,508	20·1	54,682	9 4
St. George-in-the-East	51,274	223,939	160,437	28·4	35,286	13 9
Poplar Union	49,983	347,829	257,887	25·9	39,025	15 7
Totals	623,463	2,529,548	1,822,511	28·	308,820	9 11
<i>Totals of the Middlesex Portion</i>	<i>1,849,756</i>	<i>10,799,280</i>	<i>8,982,145</i>	<i>17·8</i>	<i>1,070,917</i>	<i>11 7</i>
SURREY PORTION.						
Bermondsey	51,014	117,689	136,454	23·2	28,596	11 3
Camberwell	57,944	292,759	231,257	21·	28,735	9 11
St. George-the-Martyr	54,933	145,080	120,900	16·7	25,921	9 5
Lambeth	147,592	600,347	500,289	16·7	75,887	10 3
Newington, St. Mary	68,693	249,640	199,712	20·	29,055	8 6
St. Olave	20,525	108,009	94,610	12·4	15,071	14 8
Rotherhithe	18,840	94,750	73,767	22·1	13,561	14 5
St. Saviour's Union	37,871	160,329	123,652	22·9	24,000	12 8
Wandsworth and Clapham Un.	53,812	393,867	291,533	26·	39,652	14 9
Totals	511,224	2,222,470	1,772,174	20·3	280,478	11 —
<i>Grand Totals of the Metro- politan Districts</i>	<i>2,503,267</i>	<i>13,671,752</i>	<i>11,189,019</i>	<i>18·2</i>	<i>1,425,063</i>	<i>11 5</i>

* In comparing cols. 10 and 15, it is to be observed that the Total Cost of the expenditure repayments of loans and interest, the salaries and rations of officers, the relief of lunatics cost of the burials of paupers.

In like manner the Total Poor Rate expended (col. 6) includes a great number of indigent persons. In the last volume of the *Journal* (vol. xv, pp. 239-240) a detail will

Metropolis Poor Relief, 1857.

8		9	10	11		12	13	14	15	16
Rate in the Pound of Total Poor Rate Expenditure on the			Sum Expended for Relief to the Poor only; Year ended Lady-day, 1857.	Rate in the Pound of Relief to the Poor only on the		Mean Number of Paupers Relieved at Midsummer and Christmas; Year ended Lady-day, 1857.	Ratio of Mean Number of Paupers per 1,000 of Population.	Cost* of In-Mainte- nance and Out-relief only; Year ended Lady-day, 1857.	Average Cost for In-mainte- nance and Out-relief only, of the Mean Number of Paupers Relieved.	
Gross Estimated Rental.	Net Annual Value.	Gross Estimated Rental.		Net Annual Value.						
s. d.	s. d.	£	s. d.	s. d.	No.	Per 1,000	£	£ s. d.		
3 1	3 10 1	25,399	2 9 7	3 6	2,966	63	15,173	5 2 4		
2 3 2	3 11 1	36,453	1 8 1	2 10 8	4,125	36	21,215	5 2 10		
2 1 6	3 9 9	22,030	1 7 5	2 10 8	1,709	18	11,514	6 11 9		
1 10 3	2 2 1	17,622	1	1 2 1	2,474	40	12,026	4 17 3		
2 7 2	3 6 2	28,531	1 9 7	2 5 3	3,084	36	14,754	4 15 8		
2 8 5	3 4 7	36,178	1 9 5	2 2 9	5,110	44	23,717	4 12 10		
3 1 8	4 4 8	27,269	2 5 2	3 4 7	3,118	61	16,926	5 8 7		
2 2 9	3	23,508	1 4 2	1 9 9	2,702	54	17,055	6 6 3		
2 5 3	3 4 7	216,990	1 8 6	2 4 6	25,288	41	132,380	5 4 8		
1 11 8	2 4 9	650,826	1 2 5	1 5 6	68,711	37	405,137	5 17 11		
3 2 6	4 2 3	16,485	1 10 3	2 5	1,587	31	9,325	5 17 6		
1 11 6	2 5 8	15,990	1 1 1	1 4 6	1,910	33	9,341	4 17 10		
3 6 9	4 3 5	16,942	2 4	2 9 6	2,473	45	11,572	4 13 7		
2 6 3	3	46,823	1 6 7	1 10 5	7,758	53	33,834	4 7 3		
2 3 9	2 10 9	19,963	1 7 2	2	2,023	29	11,974	5 18 5		
2 9 5	3 2 2	9,687	1 9 5	2	1,213	59	5,229	4 6 3		
2 10 3	3 8 1	8,341	1 9 1	2 3 1	942	50	4,133	4 7 9		
2 11 9	3 10 6	15,754	1 11 6	2 6 6	1,708	45	8,851	5 3 8		
2	2 8 6	23,817	1 2 5	1 7 6	2,759	51	15,703	5 13 10		
2 6 3	3 2	173,802	1 6 8	1 11 5	22,373	44	109,962	4 18 4		
2 1	2 6 6	867,337	1 3 2	1 6 6	96,752	39	545,037	5 12 8		

for the Relief of the Poor includes, besides In-maintenance and Out-relief, the annual in asylums, expenses incurred for emigration, extra medical fees, and, in some cases, the

disbursements for Parochial and County purposes in no way connected with the relief of be found of the charges falling upon the Poor Rate in 1853-4.

TABLE I.

State, in 1856, of the ANCIENT PARISHES of ST. DUNSTON, STEPNEY, and ST. MARTIN-IN-THE-FIELDS, compared with that of some of the larger Parishes of the Metropolis.

1	2	3	4	5	6	7	8
Present Name.	Extent in Acres.	Population in 1851.	Annual Value to Property Tax in 1856.	Poor Rate Value in 1856.	County Rate Value in 1856.	Expenditure in Poor Relief in 1856.	Rate in the Pound in 1854.
STEPNEY—	No.	No.	£	£	£	£	s. d.
Bethnal Green.....	760	90,183	131,741	150,320	134,420	20,661	2 9
St. Geo.-in-the-East..	243	48,376	115,027	160,368	163,464	25,691	3 2½
Christch. Spitalfields	74	20,960	38,160	36,942	35,068	7,850	4 3
Limehouse	265	22,782	71,724	58,699	55,477*	7,781	2 7½
Mile End New Town	42	10,108	13,942	14,118	14,160	2,373	3 4½
" Old Town	681	56,602	200,928	161,802	150,348	14,609	1 9½
Poplar	1,490	28,384	204,464	165,922	154,927*	13,113	1 7
Ratcliffe	132	15,212	48,031	39,109	43,875*	6,835	3 6
Shadwell	99	11,702	33,501	26,984	30,810*	5,058	3 9
Stratford-le-Bow.....	809	6,989	23,480	30,175	27,066*	2,806	1 10½
Wapping	80	4,477	18,249	32,423	34,234	2,430	1 6
Totals	4,675	315,775	899,247	906,862	942,649	119,207	2 9†
ST. MARTIN-IN-FDS.—							
St. Martin	305	24,640	326,216	249,853	250,000	18,092	1 5½
St. George, Han. Sq.	1,161	73,230	1,071,158	751,282	893,976	21,315	- 6½
St. James, Westmstr.	164	36,406	491,248	427,100	411,396	18,620	- 10½
St. Paul, Covent Gdn.	26	5,810	41,491	42,443	43,418*	1,822	- 10½
St. Anne, Soho	53	17,335	103,648	92,246	90,675	5,795	1 3
Totals	1,709	157,421	2,033,761	1,562,926	1,689,465	65,644	1 -‡
MARYLEBONE	1,509	157,696	1,120,275	905,386	999,375	59,155	1 3½
ST. PANCRAS	2,716	166,956	881,086	748,551	706,387	47,567	1 3½
ISLINGTON	3,127	95,329	594,981	491,100	437,000	20,112	- 9½
LAMBETH	4,051	139,325	647,663	491,349	467,130	49,995	2 -½

It must be remembered that in the above parishes the Return of the *Real Property* assessed to the Property Tax is incomplete where there are Railways, Gas Works, or Canals, as the value of such property is omitted from it.

And this is the state of three other places, in England.

	Extent in Acres.	Population.	Annual Value to Property Tax in 1843.	Rateable Value in 1852.	Expenditure in Poor Relief in 1856.	Rate in the Pound in 1852.
			£	£	£	s. d.
Liverpool (Parish).....	2,220	258,236	1,568,347	1,062,671	100,359	1 5½
Birmingham „	2,660	173,951	940,173	486,036	49,176	1 3½
Manchester (Township)	1,480	186,986	1,018,051	677,446	77,394	1 10½

* The return here given is for 1855.

† Taking the whole as one parish the rate in the pound would be 2s. 7½d.

‡ Taking the whole as one parish the rate in the pound would be 9d.

Report on the Proceedings of the CONGRÈS INTERNATIONAL DE BIENFAISANCE, held in Frankfort-on-the-Maine, September, 1857. Drawn up for the Statistical Society of London, at the request of one of their Honorary Secretaries. By HENRY ROBERTS, Esq., F.S.A., one of the Vice-Presidents of the Congress.

[Read before the Statistical Society of London, 15th June, 1858.]

THE origin of the Congrès International de Bienfaisance may be traced to a suggestion made at the Congrès Pénitentiaire, held in Frankfort in 1847, and subsequently taken up at the Statistical Congress held in Brussels in 1853,* when the desire was unanimously expressed of uniting in a General Congress, those who in different countries are occupied with questions relating to the physical, the moral, and the intellectual improvement of the working classes, and the relief of the indigent. This idea was revived at the Conférence Internationale de Charité held in Paris in 1855.

The first meeting of the Congress was held in Brussels† in September, 1856, under the patronage of the King and of the Duke of Brabant, the President being M. Charles Rogier, the present Minister of the Interior, who delivered an introductory address, remarkable for its enlightened and comprehensive view of the work to be done, and of the valuable results to be anticipated from an interchange of information and experience, as well as from a peaceful rivalry of nations in the improvement of the masses of the people. At the meeting in Brussels there were present 297 members, of whom 30 were from England and 21 from France, whilst Brussels alone contributed 182 members.

The second meeting of the Congress, which was held in Frankfort-on-the-Maine, commenced the 14th and terminated the 18th September, 1857. It was attended by 170 persons, of whom 9 were from England, 9 from France, 14 from Belgium, and 56 were residents in Frankfort. The remainder comprised representatives from Holland, Prussia, Denmark, Sweden, the Russian Baltic Provinces, Austria, Bavaria, most of the minor German States, Switzerland, Lombardy, Spain, Portugal, Algiers and Brazil, in all there were present the representatives of upwards of 20 different countries.

* In 1854, a Congrès Général d'Hygiène was held in Brussels and attended by about 150 persons, representing twelve different countries. The information communicated and the discussions on that occasion, as well as those at the Congrès Pénitentiaire, and the Congrès Statistique, greatly facilitated the organization and preparative work of the Congrès International de Bienfaisance.

† A report on the proceedings of this Congress was made to the Statistical Society by their Honorary Secretary, W. G. Lumley, Esq., *vide Journal* for December 1856.

The General Assemblies were held at the Hôtel de Ville, in the Kaisersaal, the Hall of the Roman Emperors; a noble apartment, adorned with full-length portraits of forty-six German emperors and kings, who reigned from A.D. 912 to 1792. It is remarkable as the scene of the ceremonies connected with their election, and was placed by the Senate at the service of the Congress. The highest civil authorities attended the opening meeting, and at that, as well as at most of the subsequent public sittings, many ladies were present. These sittings commenced at one o'clock, the forenoon being devoted to Sectional Meetings, in which the subjects set forth in the programme were discussed in detail, and reports decided on, to be subsequently presented for adoption by the Congress collectively.

After the reception of the programme, prepared by the Committee of Organization, and the constitution of that body as a permanent Bureau, M. von Bethmann Hollweg, Privy Councillor and Member of the Chamber of Deputies at Berlin, was chosen President. His eloquent opening address presented an elaborate statement of the view in which he regarded the work of the Congress, and embraced an historical sketch of the progress of Philanthropy, shewing emphatically, that the true and comprehensive idea of charity had its source, and its full realization, only in the life of Him who came from heaven to save the lost.

At the close of the President's address, the representatives of seven different countries were added to the Bureau as Vice-Presidents, M. Ch. Rogier, the President of the first Congress, being one of them. M. Ed. Ducpetiaux, Dr. Schlemmer and Dr. Varrentrapp acted as Secretaries, whilst M. le Pasteur Bounet of Frankfort, M. Viisschers of Brussels, and Professor Mittermaier of Heidelberg, were chosen Presidents of the three Sections into which the work of the Congress was divided.

First Section.—Philanthropy—1. The objects and limit of public relief; the establishment by law of Poor-houses for the indigent. 2. The co-operation of employers in the improvement of the condition of their Workpeople; the connecting of philanthropic and provident institutions with industrial and agricultural establishments; international conventions relative to industrial work. 3. The position of domestic servants; means of improving the condition and of providing for the future prospects of servants of both sexes. 4. Special guardianship of poor children; of those who are abandoned, vicious, or morally neglected; patronage of apprentices. 5. Means of remedying the abuses of strong drinks and of arresting the progress of intemperance.

Second Section.—Education—1. The means of encouraging, improving and extending popular instruction and education; compulsory attendance at schools. 2. Infant education; crèches or public

nurseries; schools for infants, or children's gardens (Kinder Gärten).

3. Organization of elementary, industrial, and agricultural instruction.

Third Section.—Prison Reform—1. The solitary system; the conditions to which it ought to be subjected, and the limits to which its application should be restricted. 2. Provisional or conditional liberation; supplementary detention. 3. Reformatories and special establishments for the education and the reform of young delinquents, mendicants and vagabonds, and vicious, abandoned, or morally neglected children.

Under the above head, the programme presented a detailed and very carefully prepared scheme for the deliberative discussions of the Congress. It may, however, be well to notice, that towards the close of the meeting it was decided that the Congress should not assemble the next year (1858), in order to allow time for ripening the fruit of the seed sown at Frankfort; and also that for the future a more restricted programme should be adopted, which could be compassed within the limited period devoted to the meetings of the Congress.

One question, embraced under the First Section, "The liberty of Private Charity," or the right of the State to interfere with the exercise of private charity, having been recently agitated in Belgium, and given rise to grave political complications, was withdrawn by the Committee of Organization, out of deference to conflicting opinions already strongly pronounced by members of the Congress. Subsequently, the Congress accepted an offer made by M. Mathias Rosen, of Warsaw, to give a Gold Medal, or its value, 200 florins, for the best Essay on this subject, to be written in French and delivered to Dr. Varrentrapp at Frankfort before the 1st September, 1858.

The Gold Medal offered at the first Congress by M. Dutroné of Amiens, for the best Essay on "The causes and the results of Intemperance, as well as on the means of combating and preventing it," was adjudged to M. Bouquié-Lefebvre of Brussels, who, on receiving it from the President, gave a practical illustration of the spirit of the Congress, by placing its value, 300 florins, in the hands of the burgo-master, for distribution amongst the deserving poor of Frankfort.

To quote at any length the various exposés of facts, with important statistical information communicated by the representatives of the different countries which have been named, or to attempt an abridgment of the valuable reports presented with the resolutions adopted in the sections, or of the discussions which preceded the final decisions of the Congress relative thereto, would lead beyond the limit of a mere outline of the proceedings. It may, however, be right to name the communications which emanated from Great Britain. Sir Stafford Northcote, Bart., gave some details and presented a report on Reformatory Institutions. Mr. Edward Akroyd, M.P., communicated a paper on the development of the Factory

System, and on the best means of improving the relation of employer and employed. Colonel Jebb sent a communication on Penal Servitude and Conditional Pardons. The Temperance Societies were represented by Dr. J. M. M'Culloch, Dr. F. R. Lees, and Mr. T. Beggs, each of whom contributed a notice on that question. The writer of this report, presented a statement of the progress of popular education, and the instruction of the industrial classes, on sanitary reform, and the improvement of workmen's dwellings.

One important feature, as distinctly traceable in the second as it was in the first meeting of the Congress, deserves particular notice, viz., the general agreement that a marked line should be drawn between Voluntary and Involuntary Misery, a feeling of responsibility being the only remedy applicable to the former, whilst, in regard to the latter, the relief of the necessitous and the suffering poor is an obligatory duty. At the same time, the conviction was strongly manifested that results incalculably more valuable, unalloyed, and permanent, may be anticipated from a study of those various forms of human misery which call into exercise philanthropic effort, if the investigation be mainly directed to the discovery and the practical application of the best *preventive measures*. Viewed in this relationship to the work of the Congress, the words of M. Ch. Rogier, in his opening address at Brussels, have much point. "What can be more instructive, more fruitful, than these enquiries, this exchange of information, these mutual lessons of nation to nation, and these eloquent facts gathered from the very lips of the most distinguished, the most competent, the most truthful of men? Is not this the commencement of a profound reform, and of a new progress in the relations of governments and of people?"

Another characteristic feature deserves to be mentioned, that in an assembly consisting of so many members of various religious communions, and where subjects were treated of which naturally called forth the expression of strong religious principle as well as the unhesitating assertion of its great practical value and influence, nothing like discord, arising out of a forgetfulness of the feelings of others, was manifested, whilst to the clear and very practical statements of Dr. Wichern, founder of the well-known Rauhe-Haus, or Reformatory, at Hamburg, and a most zealous promoter of the Home Mission, which exercises such an extensive influence in Germany, M. Ducpetiaux, Inspector-General of Prisons, and of Charitable Establishments in Belgium, declared, that "in his quality of representative of a country essentially Catholic, he gave his full consent."

The only difficulty really felt at the Congress arose from the use of German, as well as French, a latitude which involved the loss of time and suspension of interest whilst translations were made from one language into the other.

As at the Brussels Congress, one lady, Miss Frederika Bremer, contributed an interesting paper on the agency of females in philanthropic objects, and on their employments as a means of livelihood, so at Frankfort another lady, the Baroness von Marenholtz gave some valuable information on the establishments designated "Children's Gardens," a modification of Infants' Schools, to the reform of which Madame von Marenholtz has for some years devoted herself, and has had the satisfaction of seeing about fifty schools established in Germany on the system she advocates. A detailed description of the method employed is given in the "Compte Rendu" of the Congress.

The Congress held in Brussels having decided, that "it is desirable the International Philanthropic Congress should become a permanent Institution," it became necessary to create a permanent bond, which would unite the hitherto scattered elements, and establish definitively the personnel of the Association. With this view the following statutes were compiled, and being unanimously adopted, they received the signature of upwards of one hundred adherents, mostly known by their useful labours, and belonging to more than twenty different countries.

The Objects of the Association Internationale de Bienfaisance are—

1. To place in relationship persons who in different countries interest themselves in the improvement of the condition of the working and indigent classes.
2. To form a kind of bond between the institutions and associations of a philanthropic, provident and reformatory character as well as those relating to popular education, which bond would afford the means of contributing to their mutual enlightenment and assistance in case of need.
3. To establish a permanent exchange of information, of official documents, of reports and of publications, between the members of the association and between the countries associated.
4. To make known and to recommend useful projects and institutions. To verify the experiments and experiences as well as to encourage those works which are in their nature interesting to the Association, and likely to exercise a useful influence on society in general.

The Organization and Management of the Association.—The Association is to unite all persons who in different countries interest themselves in the improvement of the condition of the working classes and the poor, and who are willing to adopt its regulations. It is to be directed by a council composed of members of different countries—the first council being designated by the Bureau of the Congrès International de Bienfaisance at Frankfort, and to have power to add new members. They will in each country place themselves in relation with philanthropic and provident societies and institutions of public utility which may be united to the International Association. The

members of the council belonging to the same country shall, as far as possible, form amongst themselves an auxiliary agency to correspond with the central agency. The auxiliary agency may be confided to an existing agency. The members of the Association are to be admitted by the agency of the nation to which they belong, by the central agency, or by their delegate.

A payment of ten francs per annum is to be made by each member, applicable to the general expenses of the Association, and to the publication of the bulletin of the International correspondence. The members of the Association are to be entitled to such documents as they may require, and the Association can obtain for them. Circular letters are also to be given which will place members in relation with the agencies of other countries, in order to facilitate their researches.

The central agency will publish in French every six months, or oftener if necessary, a bulletin, containing a list and, as far as possible, a summary analysis of the publications, reports and documents relating to the objects of the Association. The council and the agencies of the different countries will concert together for the organization and meetings of the Congress. The locale of the central agency is provisionally fixed at Brussels.*

The Prospectus of the Association Internationale de Bienfaisance, of which an abridgment only is here given, has annexed to it a description and classification of documents and publications ranged under twelve main and one hundred and twenty-four minor divisions. It is comprised in the "*Compte Rendu*"† of the Congress, published in two volumes; the first, almost exclusively in French, contains the general proceedings of the Congress, and the second consists of forty communications from various countries, which, if made in German or English, are accompanied by a French translation.

In terminating this brief and imperfect outline of the proceedings of the Congress, I cannot but allude to the deep conviction manifested, as to the importance of the results which may be anticipated from an efficient carrying out of the designs of the Association, including the International Correspondence, a branch of which it would be difficult to over estimate the value. I would also add my earnest desire that, as it is proposed to hold the next meeting of the Congress in London in 1859, such preliminary measures may be taken as will secure the rendering justice on that occasion to the philanthropic institutions of Great Britain, and place within reach of other countries the benefit of their experience.

* Address (franco) to M. Ed. Ducpetiaux, Rue des Arts, No. 22, à Bruxelles, or to the care of Mr. H. G. Bohn, Publisher, York Street, Covent Garden, London.

† The "*Compte Rendu*," both of the first and second Congress, can be obtained, each in 2 vols. 8vo., price 7 f. 50 c., of Mr. H. G. Bohn, as above.

PROCEEDINGS OF THE STATISTICAL SOCIETY.

First Ordinary Meeting.—Session 1857-8.

Tuesday, 17th November, 1857.

James Heywood, Esq., in the Chair.

Mr. Newmarch gave an account of the Proceedings of the Section of Economic Science and Statistics of the British Association at its recent Meeting in Dublin.

The following Paper was read:—

“An Account of the Proceedings of the International Statistical Congress, held at Vienna in September, 1857.” By Mr. Samuel Brown.

Second Ordinary Meeting.—Session 1857-8.

Tuesday, 15th December, 1857.

Lord Stanley, M.P., President, in the Chair.

The following Candidates were elected Fellows of the Society:—

William Acton, Esq.

James Caird, Esq., M.P.

Joseph John Fox, Esq.

Rt. Hon. Sidney Herbert, M.P.

C. H. Pearson, Esq.

Peter Lund Simmonds, Esq.

M. Edward Scheutz was elected a Foreign Honorary Member.

The following Paper was read:—

“On the Annual Fluctuations in the Number of Deaths from Various Diseases, compared with like Fluctuations in Crime and in other Events within and beyond the Control of the Human Will.” By Dr. Guy.

Third Ordinary Meeting.—Session 1857-8.

Tuesday, 19th January, 1858.

Dr. Farr, Treasurer, in the Chair.

The following Candidates were elected Fellows of the Society:—

Jesse Hobson, Esq.

Charles Frederick Howard, Esq.

Edmund E. Humphreys, Esq.

George Symmons White, Esq.

A Paper was read

“On Public Works in India.” By Col. Sykes, M.P.

Fourth Ordinary Meeting.—Session 1857-8.

Tuesday, 16th February, 1858.

James Heywood, Esq., in the Chair.

A Statement was made

“On the History of Prices in 1857.” By Mr. Newmarch.

Fifth Ordinary Meeting.—Session 1857-8.

Tuesday, 16th March, 1858.

Charles Jellicoe, Esq., in the Chair.

The following Candidates were elected Fellows of the Society:—

Lord Radstock.

| John Leslie Pilkington, Esq.

A Paper was read.

“On Railway Terminal Accommodation, and its Effects on Traffic Results.” By Mr. W. A. Wilkinson.

Sixth Ordinary Meeting.—Session 1857-8.

Tuesday, 20th April, 1858.

Viscount Ebrington, M.P., in the Chair.

The following Candidates were elected Fellows of the Society:—

David Chadwick, Esq.

| Reginald Hearle Paynter, Esq.

The following Gentlemen were elected Foreign Honorary Members:

M. David.

| Daoud Effendi.

Dr. J. B. Vernadsky.

| Count Ripaldo.

Professor Aschehoug.

| Dr. Boudin.

A Paper was read

“On the Administration of Relief to the Poor in the Metropolis.” By Mr. Lumley.

Seventh Ordinary Meeting.—Session 1857-8.

Tuesday, 18th May, 1858.

James Heywood, Esq., V.P., in the Chair.

The following Candidates were elected Fellows of the Society:—

Thomas Muir, Esq.

| William Tite, Esq., M.P.

A Paper was read

“On Indian Revenues and Taxation.” By Mr. Hendriks.

Eighth Annual Meeting.—Session 1857-8.

Tuesday, 15th June, 1858.

W. B. Hodge, Esq., in the Chair.

The following Papers were read:—

1. “On the Occupations of the People of England and Wales.” By Mr. Welton.
2. “On the Population of England and France.” By Mr. Willich.
3. “On the *Congrès de Bienfaisance*, Frankfort, 1857.” By Mr. Roberts.
4. “On Russian Statistics.” By M. Lamansky.

**THE MARRIAGES, BIRTHS, AND DEATHS,
REGISTERED IN THE DIVISIONS, COUNTIES, AND DISTRICTS OF ENGLAND.**

*The MARRIAGES for the QUARTER ended MARCH, 1858, and the BIRTHS
and DEATHS for the QUARTER ended JUNE, 1858.*

AS PUBLISHED BY AUTHORITY OF THE REGISTRAR-GENERAL.

THIS Return comprises the BIRTHS and DEATHS registered by 2,196 Registrars in all the districts of England during the spring quarter that ended on June 30th, 1858; and the MARRIAGES in 12,283 churches or chapels, about 3,968 registered places of worship unconnected with the Established Church, and 629 Superintendent Registrars' offices, in the quarter that ended on March 31st, 1858.

The gloomy appearance of the winter quarter is gradually giving place to a better state of things. The Marriages in that quarter were much below the average, and in the spring quarter the births were slightly below the average. But the public health in the spring quarter exhibited signs of improvement.

MARRIAGES.—30,034 marriages took place in the quarter that ended on March 31st; and consequently 60,068 persons married in the three months. The number is less by 6,700 than the numbers of persons who married in each of the winter quarters of the two previous years, and is rather more than the number of persons who married in the hard war winter of 1855. The marriage rate of the quarter was 1.254 per cent. per annum; or at such a rate, if it continued uniform, that 1,254 persons would marry in a year to every 100,000 persons living. The average rate is 1.410, and the rate of the quarter is such, that one out of every 9 marriages was deferred, or broken off. The stagnation of trade had cast a shadow over the prospects of the people, and they did not marry. The inhabitants of the manufacturing

**ENGLAND :—MARRIAGES, BIRTHS, and DEATHS, returned in the Years
1852-58, and in the QUARTERS of those Years.**

Calendar YEARS, 1852-58 :—Numbers.

Years	'58.	'57.	'56.	'55.	'54.	'53.	'52.
Marriages No.	159,392	159,337	152,113	159,727	164,520	158,782
Births	662,884	657,453	635,043	634,405	612,391	624,012
Deaths	420,019	390,506	425,703	437,965	421,097	407,135

QUARTERS of each Calendar Year 1852-58.

(I.) MARRIAGES :—Numbers.

Qrs. ended last day of	'58.	'57.	'56.	'55.	'54.	'53.	'52.
March .....No	30,034	33,381	33,427	29,186	33,234	35,149	32,977
June .....	....	41,296	38,820	38,549	40,518	40,446	40,092
Septmbr. ....	....	38,829	39,089	37,308	38,182	39,899	38,400
Decmbr. ....	....	45,886	48,001	47,070	47,793	49,026	47,313

QUARTERS of each Calendar Year 1852-58.

(II.) BIRTHS :—Numbers.

Qrs. ended last day of	'58.	'57.	'56.	'55.	'54.	'53.	'52.
March .....No.	171,001	170,381	169,250	166,225	160,785	161,729	161,803
June „	169,170	170,313	173,263	165,277	172,457	158,697	159,031
Septmbr. .... „	....	161,215	157,462	154,790	154,724	147,602	151,222
Decmbr. .... „	....	160,975	157,478	148,841	146,439	144,363	151,956

(III.) DEATHS :—Numbers.

Qrs. ended last day of	'58.	'57.	'56.	'55.	'54.	'53.	'52.
March .....No.	125,902	108,527	103,014	134,542	111,843	118,119	106,358
June „	107,193	100,205	100,099	106,493	102,586	107,647	100,625
Septmbr. .... „	....	100,590	91,155	87,646	113,843	92,201	100,382
Decmbr. .... „	....	110,697	96,238	97,022	109,633	103,130	99,770

districts were under the greatest depression ; and the number of marriages in Cheshire and Lancashire fell from 5,821 to 4,793, more than a thousand ; but all the parts of England and Wales are so intimately associated in evil as well as in good fortune that in every division the Marriages declined. It is to be regretted that the returns of marriages in the spring quarter cannot be obtained from the clergy in time for publication with the returns of births and deaths for this quarter ; otherwise it is probable that some improvement might be apparent.

BIRTHS.—The births of 169,170 children were registered in the quarter ended on June 30th, 1858 ; and the birth-rate was 3·482 per cent. per annum. It was slightly below the average rate of the spring season. The births decreased, or were stationary in every division.

INCREASE OF POPULATION.—169,170 births and 107,193 deaths were registered ; and the natural increase of the population of England and Wales was 61,977 in 91 days ; or 681 daily.

The probable natural increase of the population of the United Kingdom was 1,021 daily. In the preceding winter quarter it was estimated at 750.

40,961 persons sailed from the ports of the United Kingdom at which there are Government Emigration agents. After distributing proportionally 4,084 of undistinguished birth place, it appears that 1,930 were of foreign, while 20,077 were of Irish, 4,702 of Scotch, and 14,252 of English origin. Of the English emigrants, 5,717 sailed to the Australian colonies, 1,543 to the North American colonies, 6,218 to the United States, and 774 to other places.

The Emigration is still decreasing ; it was at the rate of 157 daily from England and Wales, 429 daily from the inhabitants of the United Kingdom. In the spring quarter of 1852, six years ago, 1,375 of the people emigrated daily.

ENGLAND: —*Annual Rate Per Cent. of MARRIAGES, BIRTHS, and DEATHS, during the YEARS 1852-58, and the QUARTERS of those Years.*

Calendar Years, 1852-58 :—General Per Centage Results.

YEARS	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
Estmtd. Popln. of England in thousands in middle of Year	19,523,	....	19,305,	19,045,	18,787,	18,619,	18,403,	18,206,
Marrgs. Per ct.	....	·842	·826	·837	·810	·858	·894	·872
Births .... "	....	3·374	3·434	3·452	3·380	3·407	3·328	3·428
Deaths .... "	....	2·246	2·176	2·050	2·266	2·352	2·288	2·236

QUARTERS of each Calendar Year, 1852-58.

(I.) MARRIAGES :—*Per Centages.*

Qrs. ended last day of	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
March....Per ct.	·627	·705	·705	·708	·633	·728	·778	·730
June..... "	....	·853	·860	·819	·824	·875	·883	·885
Septmbr. "	....	·809	·797	·813	·787	·813	·859	·836
Decmbr. "	....	·998	·939	·995	·989	1·015	1·053	1·027

(II.) BIRTHS :—*Per Centages.*

Qrs. ended last day of	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
March...Per ct.	3·568	3·518	3·599	3·585	3·603	3·520	3·578	3·582
June "	3·492	3·552	3·546	3·656	3·534	3·722	3·464	3·509
Septmbr. "	....	3·247	3·308	3·275	3·261	3·294	3·177	3·291
Decmbr. "	....	3·181	3·294	3·264	3·128	3·111	3·100	3·298

(III.) DEATHS :—*Per Centages.*

Qrs. ended last day of	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
March....Per ct.	2·627	2·471	2·292	2·182	2·916	2·449	2·613	2·354
June "	2·206	2·225	2·086	2·112	2·277	2·214	2·355	2·221
Septmbr. "	....	2·140	2·064	1·896	1·848	2·423	1·985	2·185
Decmbr. "	....	2·154	2·265	1·995	2·039	2·329	2·214	2·165

THE WEATHER AND THE PRICE OF PROVISIONS.—The mean temperature of April (46°) and May (52°) differed little from the average at Greenwich; June was hot throughout, and its temperature (65°) was 7° above the average. On the 16th of June the temperature near the sea rose as high as 88°, and reached the point 95° between the latitudes 51° and 52°. The mean temperature of the day was 77°;

The Average Prices of CONSOLS, of WHEAT, MEAT, and POTATOES, also the Average Quantity of Wheat sold and imported Weekly, in each of the nine QUARTERS ended June 30th, 1858.

	1	2	3	4	5	6	7
Quarters ended	Average Price of Consols (for Money).	Average Price of Wheat per Quarter in England and Wales.	Wheat sold in the 290 Cities and Towns in England and Wales making Returns.	Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the Mean Prices.		Average Prices of Potatoes (York Regents) per Ton at Water-side Market, Southwark.
			Average Number of Quarters weekly.		Beef.	Mutton.	
			No.	No.	d. d. d.	d. d. d.	s. s. s.
1856	£	s. d.					
30 June	93½	68 8	104,952	63,093	4½—6½ 5½	5—6½ 5½	70—90 80
30 Sept.	95	72 3	78,208	117,807	4½—6½ 5½	5—7 6	75—80 78
31 Dec.	92½	63 4	112,909	103,328	3½—6½ 5½	4½—6½ 5½	90—110 100
1857							
31 Mar.	93½	56 10	102,433	51,310	4½—6½ 5½	5½—7½ 6½	100—120 110
30 June	93½	56 9	107,850	42,178	4½—6½ 5½	4½—6½ 5½	105—150 127
30 Sept.	90½	59 11	92,156	55,384	4½—6½ 5½	4½—7 5½	95—115 105
31 Dec.	89½	52 0	101,025	95,587	4½—6½ 5½	4½—7 5½	130—150 140
1858							
31 Mar.	96½	46 5	99,604	64,652	4½—6½ 5½	4½—7 5½	130—175 152
30 June	97½	44 1	92,955	86,551	4½—6 5½	4½—6½ 5½	140—185 162

Note.—The Total Number of Quarters of Wheat sold in England and Wales, and entered for Home Consumption, has been as follows:—

13 Weeks ended	Grs. Sold.	Home Consumption. Grs. Entered.
1856—30 June	1,364,000	820,000
„ 30 Sept.	1,016,000	1,531,000
„ 31 Dec.	1,467,000	1,446,000
1857—31 March	1,331,000	667,000
„ 30 June	1,402,000	548,000
„ 30 Sept.	1,198,000	720,000
„ 31 Dec.	1,313,000	1,242,000
1858—31 March	1,294,000	840,000
„ 30 June	1,208,000	1,125,000

which is the highest temperature in June on record. Saturation being represented by 100, the degree of humidity in June was 67; so the air was dry, or 7° less humid than it was during 17 previous Junes. The rain-fall above the average in April and May was below the average in June. The rain-fall in the three months was 5·4 in. The air moves usually at the rate of 4 miles an hour on an average; it moved at the rate of less than a mile and half an hour in June. The mean temperature of the Thames from 55° in May rose to 67° in June. The meteorology of the different parts of the country is shown in Mr. Glaisher's Tables.

The Prices of the principal articles of Food have followed different rates: the price of the quarter of Wheat has regularly fallen in the three months of April, May, June of the years 1856, 1857, and 1858, from 68s. 8d. to 56s. 9d., and to 41s. 1d. a quarter; by the carcass at Leadenhall and Newgate Market Beef was 5½d., 5½d., and 5½d.; and Mutton 5½d., 5½d., and 5½d. a pound. While the price of wheat fell the price of Potatoes (York regents) rose from 80s. and 128s. to 163s. a ton, at the waterside market, Southwark. The prices of animal food declined, the price of wheat fell 36 per cent.; the price of potatoes rose more than 100 per cent. in the interval.

STATE OF THE PUBLIC HEALTH.—107,193 persons died in the three months of April, May, and June; the deaths were at the rate of 1,178 daily.

The mortality rate prevailing was 2·206 per cent. or 22·06 in 1000. This is slightly below the average rate, 22·25, of the ten preceding spring quarters.

The average Death Rate of the sixty-three least unhealthy districts is 17 in 1,000; and the mortality of England, corrected for age, should be 16½; but the actual rate in the quarter was 6 in excess of this rate. The 27,355 deaths in excess are principally deaths from various kinds of poisons, and are therefore properly designated Unnatural Deaths.

Upon dividing the population into two portions, (1) the 8,247,017 people living in rather close proximity to each other, and (2) the 9,680,592 living much further apart, the result, as shown in the annexed Table is that the mortality in the dense districts was at the rate of 24·73—nearly 25 in 1,000; while in the other districts over which small towns and villages are distributed, the mortality was at the rate of 19·68, nearly 20 in 1,000 of the population.

In the Town districts the rate of mortality was 8, in the rest of the country 3, in 1,000 above the rate which actually rules in comparatively healthy districts. Of the 27,355 unnatural deaths, 18,668 took place in the large town districts; 8,687 in other places.

Now in England and Wales the Town population is increasing much faster than the population of the rest of the country; and the question is therefore becoming every day graver:—How is the health of the nation to be sustained in the midst of the new dangers which millions of its people are encountering?

In the last spring quarter, while the mortality of the Country districts decreased, the mortality of the Town districts rose to 24·73, the average of the preceding ten years having been 23·94 in 1,000. This was probably due partly to the reduced earnings in the towns, to the scarcity of potatoes, and to the intense heat, which accelerated the putrefaction of organic refuse in the houses, streets, ditches and rivers.

Is the actual mortality of Cities inevitable? The Turks reply in the affirmative. Many of the cities of Europe in which the death-rate ranges from 30 to 40 acquiesce quietly in their fate; and in England, where we have adopted another course, it has been, not without some show of reason, asserted that the unnatural deaths in towns are the penalties of civilization. But what is civilization? If it consist simply in the aggregation of families on limited areas, without arrangements to meet the exigencies of their new position, it will ever have heavy penalties to pay. Uncleanliness

is, however, not a consequence of civilization; it is a relic of barbarism. The people of districts living in England wide apart experience generally a low mortality, and the mortality increases in proportion as their dwellings are brought into close proximity. People remaining the same, and indulging in the same habits, collected from their scattered habitations into a camp, and kept in that camp for some months, suffer from diseases, and are ultimately decimated by epidemics. Our towns were no better than uncleansed camps in the middle ages; and London in the seventeenth century lost 50 in 1,000, or, including the plague years, 80 in 1,000 of its inhabitants annually. The black death, sweating sickness, and plague followed each other in succession. The mortality of London was reduced to the rate of 29 in 1,000 at the beginning of this century,* civilization advanced, and in the 15 years 1840-54, the rate further fell to 25,† still remaining 10 in 1,000 above the calculated

Deaths in the Spring Quarter, (April-June) 1851-58.—Numbers.

DEATHS, &c.	1858.	Total 1848-57, (10 Years.)	1857.	1856.	1855.	1854.	1853.	1852.	1851.
In 125 Districts and 23 Sub-districts, comprising the Chief Towns	55,336	510,326	51,396	51,908	53,563	53,717	54,181	50,586	50,501
In the remaining Districts and Sub-Districts of England and Wales, comprising chiefly Small Towns and Country Parishes ...	51,870	501,749	48,810	48,137	53,931	48,569	53,616	50,037	48,957
All England	107,196	1,012,075	100,205	100,045	108,493	102,286	107,797	100,623	99,458

AREA, POPULATION, DEATHS, and MORTALITY per Cent. in the Spring Quarters, (April-June) 1848-58.

GROUPS.	Area in Statute Acres. (England.)	Population Enumerated. (England.)		Deaths in 10 Spring Quarters, 1848-57.	Average Annual Rate of Mortality per Cent. of 10 Spring Quarters, 1848-57.	Annual Rate of Mortality per Cent. in the Spring Quarter 1858.
		June 6-7th, 1841.	March 31st, 1851.			
In 125 Districts, and 23 Sub-Districts, comprising the Chief Towns	No. 2,149,800	No. 6,838,069	No. 8,247,017	No. 510,326	Per ct. 2'394	Per ct. 2'473
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly Small Towns and Country Parishes	35,175,115	9,076,079	9,680,592	501,749	2'049	1'968
All England	37,324,915	15,914,148	17,927,609	1,012,075	2'225	2'206

* See M'Culloch's Statistics of the British Empire. Vol. 2, p. 613.

† The people in early and middle life are so numerous in London, owing to the excess of births and immigration, that the mortality should be 15 in 1,000 to be at the several ages, at the same rate as it is in the healthy districts where the mean life-time is 49 years. The corrected rate of mortality is 20 in 1,000, and the actual uncorrected rate in those districts is 17 in 1,000.

healthy rate for London. As Athens in ancient story had to send seven of its youth, chosen by lot, to be devoured, so London has hitherto given up *ten* of every thousand of her inhabitants yearly to disease and untimely death. All the towns of the kingdom in the aggregate gave up proportionally this number of victims in the last three months. They were not destroyed openly. The poison by which they died was not purchased in chemists' shops. It was administered in the silence of the night, and in the streets at noonday, either with the air which they breathed, or with the water which they drank.

The poison is generated by the decomposition of effete organic matter, which gives off diffusible and dangerous products, wherever it is left beyond a day in the houses, streets, and neighbouring ditches or streams, instead of being lodged in the disinfecting earth.

It can easily be shown that the mortality bears a certain proportion to the quantity of the poison which the people inhale; and that the quantity is greatest under the cesspool system, which formerly prevailed in London, and is now in use in the French, German, and Italian towns. The mortality has gradually fallen in London as the Cesspools have been abolished; it is still high in foreign cities where the cesspools are in use. In Manchester, where the dirt is allowed to decay behind the houses, and is not thrown into sewers, the mortality was at the rate of 33, in the years 1841–50; in the foreign cesspooled cities the mortality ranges from 30 to 44 in 1,000.

Of 1,000 people in London, *ten* died unnatural deaths annually; and to make the view of the facts clear, let it be assumed for a moment that into the causes of *four* deaths no inquiry is now made, that *three* are killed by the poisonous emanations from cesspools, closets, and sinks in dwelling houses, offices, and workshops, that *two* die of diseases induced by the emanations from dirty streets or gullies, and *one* from the vapours arising from the Thames. Here evidently a great step is gained by the water system superseding the cesspool, as the noxious matter is projected into the sewers under the streets, and is partially oxydized. If the cesspools, therefore, are everywhere abolished, and the house is purified, the mortality, on the above hypothesis, will be reduced to the extent of 3; while if the corrupt sewer air in the sewers be carried above the chimneys beyond the reach of the lungs, *two* more lives will be saved; and if the water and banks of the Thames are no longer the final repositories of the town guano, *one* more life will be saved. These numbers are adopted, not as expressing exact results, but to fix attention on the fact that the impurities of London are the main causes of its insalubrity; and that in their fatal effects they may be classed in this order, (1) impurities of dwellings, (2) impurities of streets and gullies, (3) impurities of the Thames.

The progress of sanitary measures in London has hitherto resulted in the removal of the impurities from the dwelling houses into the sewers and the Thames, and this enables us to understand how the mortality has declined as the Thames has grown fouler. It also enables us to understand how the mortality of London is lower than the mortality of many other cities.

The wise policy of substituting streams of water for cesspools is fully confirmed; and experience has shown that the town guano is less hurtful in the sewers and in the rivers than in the dwellings of the people. It is only when the supply of towns is drawn from the rivers saturated with foul organic matter that the people are poisoned in great numbers by water. The vapours of the Thames, noxious as everybody possessed of common sense has now learnt to consider them, are less heavily laden with poisonous exhalations than the vapours of cesspools and sewers. The practice of laying on water, and of abolishing cesspools should therefore be actively continued. At the same time steps should be taken to destroy or to deliver the

exhalations of the sewers into the higher stratum of the atmosphere, where they would be partly destroyed, and would not be breathed, as they are now, undiluted. The Thames itself must be purified. Our present imperfect system of sewers admits of readjustment; but the country can never rest satisfied until the water which is distributed through its dwellings carries away all the town guano to fertilize the land, from which its materials were derived. Any other solution of the sewage question is provisional.

Exact observation for twenty years in every district of England and Wales places the question fairly before the country. Impure air is destroying the health of the people. The atmosphere in which they live can be purified by restoring the town guano to the fields. This involves a large immediate outlay; but the expense is not beyond the means of England. It will not exhaust the resources of a nation which freely devoted eighty millions sterling to resist the encroachments of Russia on the Turkish empire; which maintains a squadron on the coast of Africa in the hope of diminishing the slave trade; which proposes after conquering, to govern, perhaps to civilize India; and which has now a fleet on the other side of the globe opening the Chinese Empire to the enterprise of the world. If capital is sunk freely on these vast distant objects in the hope of realising returns, it will not fail when it is required to purify the air Englishmen breathe at home; for the investment will be profitable to all living men, and will confer blessings on all future generations. And if the national honour was concerned on the shores of the Black Sea, in the Baltic, on the Coast of Africa, in India, in the Chinese waters, in the presence of the enemy, is not the honour of England also concerned when the lives of her children are in peril, and no arm is stretched out to save? Can our towns strike their colours to their own accumulating dirt, and avow that they are vanquished, without ignominy? England is in sanitary science and art taking the lead in Europe, and teaching important lessons to all nations. But the work must be consummated. The mortality must be reduced. The people must be animated anew by the energies of health. And public men will find that some glory may be gained by saving life,—by great sanitary works. Honour will crown those who rescue the English race from pain, sickness, and degeneracy. They will for ever enjoy the satisfaction of having done their duty.

The Legislature has in the Acts of the present Session given the inhabitants of every district of England and Wales the power to raise the money and to execute the great works which the country requires; and it may be sanguinely hoped that the new powers will be employed to their full extent by the people themselves, under the Public Health and the Local Government Acts. The results will in a few years be apparent in the public registers.

MARRIAGES Registered in the Quarters ended 31st March, 1858-58; BIRTHS and DEATHS Registered in the Quarters ended 30th June, 1856-58, in the Divisions of England.

DIVISIONS.	AREA in Statute ACRES.	POPULATION, 1851. (Persons.)	MARRIAGES			BIRTHS			DEATHS		
			Registered in the Quarter ended the last Day of								
			March.			June.			June.		
			1856.	No.	1858.	1856.	No.	1858.	1856.	No.	1858.
ENGLD. & WALES..... Totals	No.	No.	37,344,915	33,427	30,034	173,263	170,313	169,170	100,099	100,205	107,193
I. London.....	78,029	2,362,236	5,557	5,484	4,903	22,222	22,018	21,616	14,093	13,201	14,569
II. South Eastern Counties	4,065,105	1,628,386	2,601	2,371	2,248	13,871	13,921	13,585	8,127	7,578	8,834
III. South Midland Counties	3,201,290	1,234,332	1,648	1,675	1,537	10,821	10,927	10,488	6,283	6,087	6,264
IV. Eastern Counties.....	3,214,099	1,113,982	1,582	1,568	1,494	9,739	9,601	9,411	5,735	5,379	6,191
V. South Western Counties	4,994,490	1,803,291	3,144	2,960	2,770	14,995	14,405	14,781	8,490	8,716	9,202
VI. West Midland Counties	3,865,332	2,136,573	4,046	3,981	3,610	21,984	20,982	21,370	11,790	12,821	12,454
VII. North Midland Counties	3,540,797	1,215,501	1,927	1,948	1,743	11,515	11,195	11,136	6,282	6,368	6,901
VIII. North Western Counties	2,000,227	2,488,438	5,279	5,821	4,793	27,491	26,907	26,453	16,035	16,667	17,900
IX. Yorkshire.....	3,654,636	1,789,047	3,632	3,548	3,262	18,821	18,484	18,132	10,707	10,753	11,381
X. Northern Counties	3,492,322	969,126	1,878	1,989	1,821	10,312	10,516	10,744	5,835	5,840	5,965
XI. Monmouth. and Wales	5,218,588	1,186,697	2,133	2,036	1,853	11,522	11,357	11,454	6,722	6,795	7,532

REMARKS ON THE WEATHER,

DURING THE QUARTER ENDING JUNE 30TH, 1858.

By JAMES GLAISHER, Esq., F.R.S., &c., Sec. of the British Meteorological Society.

April.—Till the 14th the air was cold, being $4^{\circ}2$ below the average; from the 15th to the 26th it was warm, the average excess being $5^{\circ}9$; and it was then cold again to the end of the month, being $1^{\circ}6$ below the average. The mean high day temperature was $57^{\circ}6$, exceeding the average by $0^{\circ}6$ and the low night temperature was $38^{\circ}0$, being $0^{\circ}9$ deficient from the average. The mean temperature of the month was nearly of its average value.

May was cold till the 15th, being $4^{\circ}1$ deficient from the average; it then became warm until the 24th, averaging $1^{\circ}2$ in excess; from the 25th to the 28th it was again cold, being $2^{\circ}4$ below the average; and then till the end of the month it was hot, the average excess being $7^{\circ}6$. The mean high day temperature was $63^{\circ}7$, being $0^{\circ}7$ below the average; and the low night temperature was $42^{\circ}8$, being $1^{\circ}4$ deficient from the average value. The mean temperature of this month was about 1° lower than the average.

June was hot throughout, the average excess being $6^{\circ}0$. The mean high day temperature of this month was $79^{\circ}5$, being $8^{\circ}6$ above the average; and the mean low night temperature was $53^{\circ}9$, being 4° above the average. The mean temperature of this month has been but once exceeded since the year 1771, a period of 87 years; viz., in the year 1846, when it was $65^{\circ}3$.

On the 16th of June the temperature near the sea rose as high as 88° , and between the latitudes 51° and 52° reached the point 95° . The mean temperature of this day at Greenwich was $76^{\circ}9$, and there is no previous instance of so high a mean temperature in the month of June.

The mean temperature of the dew-point was below its average in April and May, and 3° above its average in June. This latter month was less humid than usual, the excess of air temperature over the average being greater than that of dew-point temperature.

The mean reading of the Barometer was in defect in May, and above the average in April and June; the mean reading for the latter month being the highest during the last 17 years.

The fall of rain was in excess in the months of April and May, and in defect in June; but was about the average value for the quarter.

Thunderstorms were very prevalent in June, and some were particularly violent. Mr. Eaton of Little Bridy reports a storm of unparalleled violence having occurred

on the 16th in the north-west parts of Dorsetshire. The lightning and thunder, he says, were more terrific than any that had occurred since July 1808. The Rev. John Slatter of Rose Hill writes, June 16th, "A most furious storm at this place at 9.45 A.M. from the W. and N.W. A violent hurricane preceded it, and the rain was slow to come, and not remarkable (about half an inch); but the lightning flashed 14 times in about 30 seconds, and thunder was incessant. I never witnessed such elemental fury. No damage was done here beyond striking a fine elm tree, but elsewhere it was very mischievous."

The mean temperature of the air at Greenwich for the quarter ending May, constituting the three spring months, was $46^{\circ}4$, being exactly of the average value.

1858. Months.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.				
		Mean.	Diff. from Average of 37 Years.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.		Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.
April	46.2	+0.5	-0.3	42.7	-0.8	38.7	-1.4	19.6	+1.5	49.6	In. .286	In. -.014	Gr. 9.7	Gr. -0.3	
May	51.7	-0.8	-1.2	47.7	-1.4	43.6	-1.9	21.0	+0.6	55.3	.285	-.015	8.2	-0.2	
June	64.9	+6.9	+6.2	58.8	+4.2	53.7	+3.1	25.6	+5.2	67.3	.414	+0.045	4.6	+0.5	
Mean.....	54.8	+2.2	+1.6	49.7	+0.7	45.8	0.0	22.0	+2.4	57.4	.311	+0.005	8.5	-0.0	

1858. Months.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Amnt.	Diff. from Average of 40 Years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
											At or below 30°.	Between 30° and 40°.	Above 40°.		
April	76	- 8	29.779	+0.043	546	+ 2	2.4	+0.6	Miles. 73	18	10	2	18.6	42.2	
May	75	- 1	29.709	-0.053	538	...	1.8	+0.3	96	10	7	14	23.8	63.0	
June	67	- 7	29.915	+1.17	527	- 4	1.2	-0.7	84	...	2	23	35.0	55.0	
Mean.....	73	- 4	29.801	+0.035	537	- 1	Sum 5.4	Sum +0.1	Mean 68	Sum 28	Sum 19	Sum 44	Lowest 18.0	Highest 55.0	

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

ENGLAND.—*Meteorological Table, Quarter ended 30th June, 1858.*

NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tempera- ture in the Quarter.	Mean Monthly Range of Tempera- ture.	Mean Daily Range of Tempera- ture.	Mean Tempera- ture of the Air.	Mean Degree of Humidity.	WIND.				Mean Amount of Cloud.	RAINF.	
									Mean estimated Strength.	Relative Proportion of				Number of Days on which it fell.	Amount collected.
										N.	E.	S.	W.		
	in.	°	°	°	°	°	°								in.
Guernsey	29.596	80.0	37.0	43.0	29.3	11.6	52.3	84	1.8	27	21	19	24	27	4.2
Helston	29.689	88.0	35.0	53.0	39.7	16.6	55.7	82	1.8	22	16	25	28	30	7.2
Kreker	29.674	86.1	30.4	55.7	40.6	18.6	54.5	71	1.7	29	14	30	18	45	10.1
Ventnor	29.657	82.0	32.0	50.0	32.3	11.6	55.3	83	...	14	25	18	34	27	5.7
Worthing	29.654	76.0	32.8	43.2	28.0	11.6	54.1	82	0.7	16	27	25	23	23	4.0
Barnstaple	29.661	79.0	31.5	47.5	37.5	15.6	54.4	77	...	15	24	20	32	38	9.6
Clifton	29.675	86.2	27.0	59.2	44.2	18.2	53.2	78	0.7	21	19	18	33	39	7.4
Royal Observatory	29.667	94.5	27.2	67.8	49.0	22.0	54.3	73	...	20	20	23	28	33	5.4
St. Thomas's Hos.	29.617	94.8	31.5	63.3	41.2	17.8	56.3	71	...	19	22	14	36	34	4.8
Oxford	29.699	90.0	25.0	65.0	45.0	18.7	53.5	75	1.4	...	...	...	...	30	7.5
Hartwell Rectory	29.665	89.2	27.0	62.2	47.0	20.9	53.9	74	1.1	17	22	24	28	32	4.9
Royston	29.711	93.2	24.8	68.4	51.2	23.0	54.1	75	...	28	18	20	25	47	6.3
Lampeter	29.680	82.4	21.8	60.6	48.4	20.9	51.6	84	0.7	13	19	28	31	46	9.7
Norwich	29.663	90.0	24.0	66.0	46.3	18.7	53.7	78	1.2	19	19	28	25	28	4.5
Derby	29.714	84.0	25.0	59.0	44.7	17.3	52.6	71	...	...	...	...	...	...	5.7
Holkham	29.677	89.8	24.3	65.5	46.8	17.3	52.1	79	1.3	31	12	30	18	...	4.2
Nottingham	29.728	92.2	23.0	69.2	53.9	22.6	54.3	69	0.3	19	24	22	26	30	5.1
Liverpool	29.713	79.9	31.9	48.0	33.9	12.6	53.0	77	1.1	...	...	...	...	38	6.3
Wakefield	29.666	88.4	22.5	65.9	51.9	19.5	53.4	80	1.8	20	18	20	33	43	9.1
Stonyhurst	29.658	82.3	27.1	55.2	44.5	16.7	50.8	81	1.2	19	15	20	37	43	8.6
York	29.626	85.0	28.0	57.0	40.5	16.7	51.7	85	...	14	28	20	29	36	3.8
Scarborough .....	...	79.1	28.5	50.6	34.3	10.9	49.4	...	2.8	19	14	30	27	...	4.0
North Shields	29.751	76.6	25.0	51.6	41.0	14.7	49.1	84	1.7	20	20	24	27	37	5.7
Allenheads	29.677	81.2	22.5	58.7	44.6	16.4	47.6	78	1.8	13	19	23	36	49	7.5

IMPORTS.—(United Kngdm.)—*First Five Months (Jan.—May,) 1858-7-8.*
Computed Real Value of Articles of Foreign and Colonial Merchandise Imported.

(First Five Months.) FOREIGN ARTICLES IMPORTED.		1858.	1857.	1856.
		£	£	£
RAW MATLS.— <i>Textile.</i>	Cotton Wool ...	13,178,000	13,369,000	11,813,000
	Wool (Sheep's) ..	2,483,	3,299,	2,314,
	Silk	2,278,	6,226,	2,429,
	Flax	445,	718,	505,
	Hemp	281,	360,	310,
	Indigo	490,	695,	443.
		19,155,000	24,667,000	17,814,000
" " <i>Various.</i>	Hides	540,000	1,304,000	673,000
	Oils	979,	1,016,	1,127,
	Metals	1,130,	1,142,	1,032,
	Tallow	465,	683,	590,
	Timber.....	638,	1,157,	922,
		3,752,000	5,302,000	4,344,000
" " <i>Agricll.</i>	Guano	1,949,000	504,000	1,163,000
	Seeds	560,	638,	830,
		2,509,000	1,142,000	1,993,000
TROPICAL, &c., PRODUCE.	Tea	1,906,000	2,313,000	2,251,000
	Coffee	523,	390,	386,
	Sugar & Molasses	4,110,	5,112,	3,412,
	Tobacco	407,	584,	353,
	Rice	595,	417,	457,
	Fruits	140,	358,	74,
	Wine	733,	1,526,	1,000,
	Spirits	389,	1,159,	676,
		8,803,000	11,859,000	8,609,000
FOOD	Grain and Meal..	7,892,000	6,798,000	6,855,000
	Provisions	1,332,	1,849,	1,561,
		9,224,000	8,647,000	8,416,000
Remainder of Enumerated Articles		1,043,000	1,508,000	1,134,000
TOTAL ENUMERATED IMPORTS....		44,486,000	53,125,000	42,310,000
Add for UNENUMERATED IMPORTS (say)		11,121,000	13,281,000	10,577,000
TOTAL IMPORTS.....		55,607,000	66,406,000	52,887,000

The Imports for first six months are not yet published.

EXPORTS.—(United Kingdm.)—First Six Months (Jan.—June,) 1888-7-6.
Declared Real Value of Articles of British and Irish Produce and Manufactures Exported.

(First Six Months.) BRITISH PRODUCE, &c., EXPORTED.		1858.	1857.	1856.
	£	£	£	
MANFES.—Textile.	Cotton Manufactures..	15,385,000	15,373,000	14,033,000
	„ Yarn	4,478,	4,004,	3,644,
	Woollen Manufactures	4,148,	5,531,	4,642,
	„ Yarn	1,132,	1,323,	1,278,
	Silk Manufactures ...	768,	1,457,	1,120,
	„ Yarn	80,	183,	138,
	Linen Manufactures ...	1,922,	2,390,	2,334,
	„ Yarn	761,	836,	613,
		28,674,000	31,097,000	27,802,000
	„ Sewed. Apparel	851,000	948,000	769,000
	Haberd. and Millary	1,557,	2,055,	1,713,
		2,408,000	3,003,000	2,482,000
METALS	Hardware and Cutlery	1,502,000	1,901,000	1,703,000
	Machinery	1,794,	1,680,	1,090,
	Iron	5,393,	7,114,	6,425,
	Copper and Brass	1,327,	1,355,	1,266,
	Lead and Tin	1,040,	1,361,	1,131,
	Coals and Culm	1,522,	1,486,	1,269,
		12,578,000	14,897,000	12,887,000
Ceramic Manufcts.	Earthenware and Glas	830,000	1,093,000	921,000
Indigenous Mfrs.	Beer and Ale	1,093,000	872,000	839,000
	Butter	221,	275,	302,
	Cheese	36,	59,	61,
	Candles	70,	151,	140,
	Salt	143,	190,	174,
	Spirits	97,	490,	372,
	Soda	347,	375,	272,
		2,007,000	2,412,000	2,160,000
Various Manufcts.	Books, Printed	183,000	206,000	187,000
	Furniture	130,	131,	81,
	Leather Manufactures	932,	1,133,	737,
	Soap	98,	131,	135,
	Plate and Watches ...	219,	255,	198,
	Stationery	360,	358,	323,
		1,922,000	2,214,000	1,661,000
Remainder of Enumerated Articles		1,308,000	1,630,000	1,955,000
Unenumerated Articles		3,741,	4,480,	4,100,
TOTAL EXPORTS		53,468,000	60,826,000	53,968,000

SHIPPING.—FOREIGN TRADE.—(United Kingdom).—*First Six Months (Jan.—June) of the Years 1858, '57, and '56. Vessels Entered and Cleared with Cargoes, including repeated Voyages, but excluding Government Transports.*

(First Six Months.) ENTERED:—	1858.			1857.		1856.	
	Vessels.	Total Tonnage.	Average Tonnage.	Vessels.	Total Tonnage.	Vessels.	Total Tonnage.
<i>Vessels belonging to—</i>	No.	Tons.	Tons.	No.	Tons.	No.	Tons.
United Kingdom and Dependencies	8,312	2,204,473	265	7,556	2,147,442	7,299	2,086,709
Russia	51	14,322	281	42	8,875	15	3,008
Sweden	300	47,675	155	180	30,729	160	29,005
Norway	791	156,457	198	722	133,391	750	137,310
Denmark	1,149	110,600	96	1,208	112,669	761	68,094
Prussia and other German States	1,315	285,726	217	1,628	282,203	1,079	188,995
Holland and Belgium..	562	86,235	153	721	120,054	587	91,577
France	1,405	116,976	83	466	34,529	452	27,165
Spain, Portugal, and Italy	433	111,537	257	250	58,765	256	52,590
Other European States	77	19,904	258	8	2,711	35	9,844
United States	640	609,775	953	583	588,538	635	628,913
Other States, America, Asia, and Africa	11	4,276	389	14	4,962	15	4,692
Totals Entered	15,046	3,767,956	250	13,378	3,524,868	12,044	3,327,902
CLEARED:—							
	Vessels.	Total Tonnage.	Average Tonnage.	Vessels.	Total Tonnage.	Vessels.	Total Tonnage.
United Kingdom and Dependencies	11,491	2,924,688	254	12,269	3,072,872	11,677	2,787,004
Russia	84	28,501	339	60	15,495	7	1,090
Sweden	337	67,816	201	259	57,702	219	47,109
Norway	573	116,863	204	795	169,170	815	165,969
Denmark	1,200	121,446	101	1,382	141,320	1,047	97,887
Prussia and other German States	1,918	338,335	176	1,974	335,379	1,552	257,233
Holland and Belgium..	985	167,610	170	1,057	201,063	824	135,086
France	2,140	224,456	105	1,723	189,199	1,849	170,477
Spain, Portugal, and Italy	579	163,246	282	512	146,142	308	63,437
Other European States	105	27,868	265	8	2,735	54	16,668
United States	605	575,414	951	641	637,357	683	647,519
Other States, America, Asia, and Africa	8	2,785	348	9	3,022	13	4,771
Totals Cleared	20,025	4,759,028	237	20,689	4,971,456	19,048	4,394,250

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.
 —(United Kingdom.)—*Computed Real Value for the First Six Months*
(Jan.—June) of the Year 1858.

(First Six Months. 1858.)	Gold.	Silver.	TOTAL.
IMPORTED FROM:—	£	£	£
Russia, Hanse Towns, Holland, and Belgium.....	1,319,000	385,000	1,704,000
France.....	460,	1,250,	1,710,
Portugal, Spain, and Gibraltar	166,	380,	546,
Malta, Turkey, and Egypt	734,	11,	745,
West Coast of Africa	58,	5,	63,
China	35,	86,	121,
Australia	4,372,	....	4,372,
Mexico, South America and W. Indies.....	2,383,	1,543,	3,926,
United States	2,826,	96,	2,922,
Other Countries	34,	27,	61,
Totals Imported....	12,387,000	3,783,000	16,170,000
EXPORTED TO:—			
Hanse Towns, Holland, and Belgium....	212,000	846,000	1,058,000
France.....	5,620,	207,	5,827,
Portugal, Spain, and Gibraltar	66,	....	66,
India and China (via Egypt)	57,	3,112,	3,169,
South Africa	64,	3,	67,
Mauritius.....	107,	26,	133,
Danish West Indies	9,	68,	77,
United States	135,	....	135,
Brazil	134,	57,	191,
Other Countries	8,	8,	16,
Totals Exported....	6,412,000	4,327,000	10,739,000

REVENUE.—QUARTER ENDED 30TH JUNE, 1858.

An Abstract of the Net Produce of the REVENUE of the United Kingdom in the YEARS and QUARTERS ended 30th June, 1858 and 1857.—(Continued from page 219, ante.)

YEARS ended 30th June.				
Sources of Revenue.	1858.	1857.	Increase.	Decrease.
	£	£	£	£
Customs	22,838,794	23,606,468	....	767,674
Excise	17,944,000	17,667,000	277,000	....
Stamps	7,649,598	7,364,617	284,981	....
Taxes.....	3,154,033	3,009,020	57,013	....
Property Tax.....	10,330,162	16,168,723	....	5,838,561
Post Office.....	3,010,060	2,845,000	165,000	....
Crown Lands.....	276,654	284,857	....	8,203
Miscellaneous	1,676,475	1,034,136	642,339	....
<i>Totals</i>	66,879,716	72,067,821	1,426,333	5,614,438
			<i>Net Decr. £5,188,105</i>	

QUARTERS ended 30th June.				
Sources of Revenue.	1858.	1857.	Increase.	Decrease.
	£	£	£	£
Customs	5,879,039	6,149,349	....	270,310
Excise	4,626,000	4,507,000	119,000	....
Stamps	2,084,370	1,850,491	233,879	....
Taxes.....	1,326,000	1,324,000	2,000	....
Property Tax.....	1,199,587	2,455,540	....	1,255,953
Post Office.....	765,000	675,000	90,000	....
Crown Lands.....	64,000	64,000	....	....
Miscellaneous	335,970	256,382	79,588	....
<i>Totals</i>	16,279,966	17,281,762	524,467	1,526,263
			<i>Net Decr. £1,001,796</i>	

REVENUE (UNITED KINGDOM).—QUARTER ENDED 30TH JUNE, 1858 :—APPLICATION.

An Account showing the REVENUE and other RECEIPTS of the QUARTER ended the 30th of June, 1858; the Application of the same, and the Charge of the Consolidated Fund for the said Quarter, together with the Surplus or Deficiency upon each Charge.

Surplus Balance beyond the Charge of the Consolidated Fund for the Quarter ended 31st March, 1858, viz. :—	£	Amount applied out of the Income for the Quarter ended 30th June, 1858, to Redemption of Exchequer Bills (Deficiency) for the Quarter ended 31st March, 1858,	£
Great Britain .. .. .	..	Amount Applied out of the Income to Supply Services in the Quarter ended 30th June, 1858	1,201,420
Ireland.....	£486,773	Ditto for Exchequer Bonds redeemed	8,542,507
	486,773		2,000,000
Income received in the Quarter ended 30th June, 1858, as shown in page 363	16,279,966	Charge on the Consolidated Fund for the Quarter ended 30th June, 1858, viz. :—	
Amount raised by sale of Exchequer Bonds in part of a grant of £2,000,000.....	1,000,000	Interest of the Permanent Debt.....	£6,260,529
Amount received in the Quarter ended 30th June, 1858, in repayment of Advances for Public Works, &c.	334,685	Terminable Debt.....	655,907
	18,101,424	Interest of Exchequer Bills (Deficiency)	156
		The Civil List	100,546
		Other Charges on Consolidated Fund	356,302
		Advances for Public Works, &c.	303,703
			1,677,143
Balance, being the Deficiency on 30th June, 1858, upon the charge of the Consolidated Fund in Great Britain, to meet the Dividends and other Charges payable in the quarter to 30th September, 1858, and for which Exchequer Bills (Deficiency) will be issued in that Quarter.....	1,735,700	Surplus balance beyond the charge of the Consolidated Fund for the Quarter ended 30th June, 1858, viz. :—	
	1,735,700	Great Britain	416,054
		Ireland	416,054
	£19,887,124		£19,887,124

SUGAR.—Average Prices of Brown, or Muscovado, Sugar per cwt. in Bond for each Week ended Saturday in 1857, as published in London Gazette.

The duty per 20 & 21 Vict., c. 61, (25th August, 1857,) is, on Muscovado Sugar, 12s. 8d. per cwt.

Weeks ended	Imported from British Possessions.				Weeks ended	Imported from British Possessions.			
	America.	Mauritius.	East Indies.	Average.		America.	Mauritius.	East Indies.	Average.
1857.	s. d.	s. d.	s. d.	s. d.	1857.	s. d.	s. d.	s. d.	s. d.
3 Jan.	....	....	....	....	4 July	44 2½	....	....	....
10 "	36 3	35 10½	39 5½	38 2½	11 "	44 6½	....	....	....
17 "	35 6½	36 11½	36 6½	36 1½	18 "	41 2	37 11½	....	40 7½
24 "	37 —	37 5	36 6½	36 11½	25 "	40 1½	42 4	....	40 4½
31 "	36 11	36 10½	40 4½	38 2½	1 Aug.	41 6	34 4½	....	41 3½
7 Feb.	37 11½	36 9½	37 4½	37 7½	8 "	39 7	....	....	....
14 "	39 3½	39 —	42 7½	41 1	15 "	38 5½	....	....	....
21 "	38 1½	....	36 4½	37 5½	22 "	35 2½	....	....	....
28 "	39 5	39 —	36 3	38 8½	29 "	36 4	37 —	29 7½	36 3½
7 Mar.	37 5½	43 6½	31 9	39 3½	5 Sept.	36 5½	34 8½	44 6	38 1½
14 "	37 10½	36 5½	....	37 8½	12 "	35 1½	27 1½	....	33 9½
21 "	37 4½	28 9	40 1	37 3	19 "	35 8	24 10½	36 8½	35 4
28 "	38 3½	39 5½	43 3	39 3½	26 "	35 7½	29 4½	24 4½	35 1½
4 Apl.	39 5	30 5½	39 4	37 1½	3 Oct.	35 6	32 2½	45 —	35 6½
11 "	39 10½	39 6½	37 9½	39 9	10 "	35 —	29 6½	39 4	34 2
18 "	40 4½	42 8½	39 5½	40 8½	17 "	31 6½	....	25 4	31 4½
25 "	40 3½	42 4½	....	40 11	24 "	31 —	....	....	....
2 May	40 4½	40 3½	....	40 4½	31 "	29 7	....	....	....
9 "	43 6½	45 3½	....	44 10½	7 Nov.	24 4	....	....	....
16 "	44 10½	48 4	47 1½	47 3½	14 "	23 3	16 2	....	20 4½
23 "	44 2½	....	....	....	21 "	26 —	....	....	....
30 "	45 —	43 8½	....	44 10	28 "	25 1½	....	....	....
6 June	44 —	43 4½	48 7	44 —	5 Dec.	26 3½	17 4	....	23 3½
13 "	46 2	....	....	....	12 "	26 1	19 7½	26 10½	24 11½
20 "	44 7½	43 9½	48 4½	45 9	19 "	26 9½	16 5½	....	26 6½
27 "	45 2½	44 3½	49 3½	46 11½	26 "	30 4½	....	31 5½	31 7½

The blanks indicate that no return was made.

CORN.—Gazette Average Prices, (ENGLAND AND WALES,) during each Week of the Second Quarter of 1858; together with the MONTHLY and QUARTERLY Average.

[Communicated by H. F. JADIS, Esq., Comptroller of Corn Returns.]

Weeks ended Saturday, 1858.		Weekly Average. (Per Impl. Quarter.)					
		Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1858.—April	3.....	44 3	36 10	23 5	31 3	38 4	41 9
"	10.....	43 1	36 3	21 1	30 9	38 6	41 1
"	17.....	43 2	36 7	21 7	30 4	38 10	41 5
"	24.....	44 9	36 6	24 9	33 3	39 9	41 6
Average for April, 1858 ...		43 9½	36 6½	24 2½	31 4½	38 10½	41 5½
1858.—May	1.....	44 5	36 1	25 4	28 1	40 3	42 4
"	8.....	44 2	35 6	25 7	30 10	40 9	42 2
"	15.....	44 11	35 -	26 8	35 7	40 9	42 1
"	22.....	44 6	34 9	26 1	32 8	41 6	42 7
"	29.....	44 8	31 3	26 2	33 9	41 8	42 8
Average for May, 1858....		44 6½	35 1	25 9	32 2	40 11½	42 4½
1858.—June	5.....	44 9	33 7	26 5	31 -	42 5	43 3
"	12.....	44 7	33 6	26 -	33 -	42 10	44 3
"	19.....	43 10	30 7	26 10	26 -	42 5	43 4
"	26.....	43 -½	31 1	25 10	33 10	42 8	41 3
Average for June, 1858....		44 -	32 2	26 3½	30 11½	42 5½	43 -½
Average for the Quarter ...		44 1½	34 7½	25 5½	31 6½	40 9½	42 3½

LONDON STOCK AND SHARE MARKETS.—APRIL, MAY, JUNE, 1858.

Stocks and Railway Shares.	Amt. of Share.	Armt. Paid.	PRICE ON THE			Highest Price during			Lowest Price during		
			1 April.	3 May.	1 June.	April.	May.	June.	April.	May.	June.
Consols.....	...	...	96½	97½	96½ to 1	97½	98½	96½	96½	97½	96½
Exchequer Bills.....	...	...	35s. to 35s. pm.	35s. pm.	35s. pm.	40s. pm.	45s. pm.	37s. pm.	33s. to 39s. pm.	15s. pm.	30s. pm.
Brighton	Stock	100	106	106	108½	108½	109	109	104½	106	107
Caledonian	"	"	86½	85½	82½	88	87½	85½	85	82½	71½
Eastern Counties	"	"	58½	61½	61	60½	63½	61½	57	60½	59½
Great Northern	"	"	103	103½	102½	103½	104½	103½	101	102	99
Great Western	"	"	87½	86½	84	88½	87	84½	88½	85½	82½
London & North-Western	"	"	93	96	92½	96½	96	92½	93	91½	89½
Midland	"	"	93½	95	92½	96½	96½	93½	90½	91½	90½
Lancashire and Yorkshire	"	"	87½	91½	90½	90	93½	90½	87	89½	88½
Sheffield	"	"	...	39½	37½	...	39½	...	...	37	36½
South-Eastern	"	"	69½	72½	68½	71	72½	68½	68½	68½	65
South-Western	"	"	93	96½	94½	95	97½	95	91½	93½	91
Berwick	"	"	91	94	91	93	94½	91½	90	90½	88½
York and North Midland..	"	"	73	76	71½	75	77	72	71½	71½	68½
Northern of France.....	90	16	37½	37½	36½	38½	37½	36½	37½	36½	35½
East Indian.....	Stock	100	109½	111½	106½	111½	111½	106½	109½	103½	108

BANK OF ENGLAND.—WEEKLY RETURN.

An Account, pursuant to the Act 7th and 8th Victoria, c. 32, for each Week ending on a Wednesday, during the Second Quarter (April—June) 1858.

1.	2.	3.	4.	5.	6.	7.
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.	DATES.	Assets.			Notes in Hands of Public.	Minimum Rates of Discount at Bank of England.
Notes Issued.	(Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	(Col. 1 minus col. 16.)	
Mins. £	1858.	Mins. £	Mins. £	Mins. £	Mins. £	1858. Per Cent.
31,99	Apl. 7	11,01	3,46	17,52	20,14	11 Feb. 3
31,96	" 14	11,01	3,46	17,49	20,48	
32,27	" 21	11,01	3,46	17,80	20,52	
32,33	" 28	11,01	3,46	17,86	20,41	
31,99	May 5	11,01	3,46	17,52	20,57	
31,49	" 12	11,01	3,46	17,02	20,38	
31,63	" 19	11,01	3,46	17,16	20,28	
31,84	" 26	11,01	3,46	17,37	20,19	
31,96	June 2	11,01	3,46	17,49	20,13	
31,72	" 9	11,01	3,46	17,25	19,79	
31,68	" 16	11,01	3,46	17,21	19,45	
31,82	" 23	11,01	3,46	17,35	19,45	
31,71	" 30	11,01	3,46	17,24	20,42	

BANKING DEPARTMENT.

8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
Liabilities.					DATE.	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			(Wednesdays.)	Government.	Other.	Notes.	Gold and Silver Coin.
Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	1858.	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £
14,55	3,12	6,99	13,73	,82	Apl. 7	9,95	16,62	11,85	,79	39,21
14,55	3,16	2,99	16,92	,83	" 14	9,74	16,41	11,48	,82	38,45
14,55	3,17	3,32	16,00	,88	" 21	9,87	15,51	11,75	,79	37,92
14,55	3,17	3,83	15,66	,86	" 28	9,89	15,45	11,92	,81	38,07
14,55	3,20	4,61	14,53	,84	May 5	10,26	15,29	11,42	,76	37,73
14,55	3,21	2,75	15,24	,88	" 12	9,53	15,21	11,11	,78	36,63
14,55	3,21	4,74	13,97	,85	" 19	10,53	14,67	11,35	,77	37,32
14,55	3,22	4,93	13,99	,81	" 26	10,53	14,58	11,65	,74	37,50
14,55	3,16	5,01	14,37	,77	June 2	10,53	14,78	11,83	,72	37,86
14,55	3,16	5,65	13,75	,80	" 9	10,58	14,63	11,93	,77	37,91
14,55	3,16	6,06	13,66	,78	" 16	10,63	14,65	12,23	,70	38,21
14,55	3,16	7,30	12,58	,73	" 23	10,65	14,61	12,37	,69	38,32
14,55	3,17	7,40	13,20	,77	" 30	10,68	16,42	11,29	,70	39,09

CIRCULATION.—COUNTRY BANKS.

Average amount of Promissory Notes in Circulation in ENGLAND and WALES, for each Week ended on a Saturday during the Second Quarter (April—June) of 1858; and also the Average of Promissory Notes in Circulation in SCOTLAND and IRELAND during the Four Weeks ended on the 10th April, the 8th May, and the 5th June, 1858.

ENGLAND AND WALES.				SCOTLAND.				IRELAND.			
DATES.	Private Banks. (Fixed Issues, 4·40.)	Joint Stock Banks. (Fixed Issues, 8·30.)	TOTAL. (Fixed Issues, 7·70.)	Four Weeks, ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 3·00.)	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6·35.)	
1858.	Mins. £	Mins. £	Mins. £	1858.	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	
Apl. 3	3,25	2,80	6,05	Apl. 10	1,36	2,25	3,61	3,05	3,18	6,23	
„ 10	3,36	2,88	6,24								
„ 17	3,37	2,91	6,28								
„ 24	3,34	2,91	6,25								
May 1	3,33	2,91	6,24	May 8	1,40	2,31	3,71	3,19	3,07	6,26	
„ 8	3,35	2,93	6,28								
„ 15	3,37	2,94	6,31								
„ 22	3,33	2,92	6,25								
„ 29	3,27	2,86	6,13								
June 5	3,25	2,80	6,05	June 5	1,59	2,65	4,24	3,20	2,90	6,10	
„ 12	3,21	2,77	5,98								
„ 19	3,17	2,74	5,91								
„ 26	3,18	2,75	5,93								

LONDON JOINT-STOCK BANKS.

Abstract of Statements contained in the Reports for the Half-Year ended 30th June. 1858.

BANKS.	Estab-lished.	Paid-up Capital.	Current and Deposit Accounts.	Guarantee Fund.	Rate of Dividend and Bonus per Annum.	Ratio of Paid-up Capital and Guarantee Fund to Deposit and Current Accounts.
		£	£	£	Per Cent.	Per Cent.
London and Westminster..	1834	1,000,000	12,443,745	165,204	16	9·36
London Joint Stock	1836	600,000	10,287,623	185,219	22½	7·67
Union Bank of London	1839	600,000	9,032,134	165,000	15	8·47
London and County	1839	500,000	4,178,283	105,000	10	14·48
Commercial Bank of Lond.	1839	300,000	935,081	75,000	6	40·10
City Bank	1855	300,000	1,252,250	30,000	8	26·35
Bank of London	1855	300,000	1,059,352	8,000	5	29·07
Unity Bank	1855	161,305	103,447	...	....	156·00
Western Bank of London..	1856	200,000	228,622	2,243	....	88·46
TOTAL		£ 3,961,305	39,520,537	740,266		

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY.

DECEMBER, 1858.

CHRONICON PRETIOSUM SNATHENSE; or Lists of PRICES of Various Kinds of Agricultural Produce, and of other Articles, in the Ecclesiastical PECULIAR of SNAITH, in the West Riding of Yorkshire, in the SIXTEENTH, SEVENTEENTH, and EIGHTEENTH Centuries. Compiled from the Probate Records of the Peculiar:—by THE REV. CHARLES BEST ROBINSON, M.A., of Withernwick, near Hull, Fellow of the University of Durham.

[Read before the Statistical Society, 16th November, 1858.]

CONTENTS:

	PAGE		PAGE
I.—Introduction	369	III.—Provisions. — Butter and Cheese; Bacon and Beef; Bees and Honey	395
II.—Agricultural Produce and Land.—Corn; Hay; Wool; Hemp; Land per Acre; Fallows; Manure; Turf; Wood; Timber; and Coals.....	375	IV.—Animals.—Horses; Cows; Oxen; Sheep; Pigs; Goats; Poultry	396
		V.—Miscellaneous. — Bricks; Boats; Linen; Miscellaneous; Sundries	406

I.—Introduction.

THE value and interest of Agricultural Statistics is daily becoming better known and wider extended. The cause of many a political movement has been the price of Corn; and till we inquire into its supply, and the result of the preceding harvest, we are hardly in a position to understand and account for the events of each year, as we read them in the page of history. But it is not from the averages of Corn only that we obtain a key to unlock the mysteries of State; the clergy know how unfavourable to them in practice has been the commutation of their tithe; and it is pretty generally acknowledged that other articles of produce should have been taken into account. But

very few lists of prices* of general articles are in print, while there are many of Wheat† and other grain; therefore the more pains have been taken to bring prominently forward those, the prices of which may be presumed to be less known. I have also endeavoured to fix, as far as possible, the price of *one* article of every description; a matter very difficult, from the anxiety of those who compiled the inventories to lump together the stock of the deceased—possibly that they might the sooner arrive at the “bread and cheese and ale when the goods was praised,” so constantly charged among the debts. But, with all my care, a good deal of cross division will be detected, thanks to the expertness of the appraisers in jumbling together the most opposite items in the most unconcerned manner.‡

I have remarked, in a work which I had the honour of editing for one of our publishing Societies,§ that a complete list of prices would teach farmers contentment; I may add that it would convey the same valuable lesson to us all; that it would make us sensible also of the extraordinary advance which practical Agriculture has made, because it has called in the aid of science; and suggest that sound knowledge of the theory will in every art contribute to practical excellence. Here, then, is an authentic statement of every kind of produce beginning in 1568, selected with a view to exhibit the increase in value of commodities as the Precious Metals became cheaper; to mark the fluctuations caused by war, famine, or excessive exportation; to ascertain the price current of one ordinary horse or cow, &c., as the case might be, and to preserve some of those homely names for the varieties of kind and eccentricities of colour, the application of which is already dubious, and in the day towards which we are fast progressing, when “the spade and flail” will be forgotten—will be positively unknown.

The question will naturally suggest itself, how far the prices quoted in inventories may be relied upon? I have heard the opinion expressed by antiquaries of note, that they are always much

* The publications of the Surtees, Camden and Cheetham Societies, abound with information on these points; all the more valuable because it is only incidentally introduced. Consult also our modern works of Topography, such as “Gage’s ‘Thingoe,’ Poulson’s ‘Holderness,’ ii. 49, 76, and Raine’s ‘North Durham,’ *passim*. As to wages and the value of crops, see Jacob’s “Country Gentleman’s Vade Mecum,” Lond. 1717, Trusler’s “Practical Husbandry,” Lond. 1780, &c.

† See the lists in the “Chronicon Pretiosum,” Lond., 1707, in Scaum’s “Beverlac,” and in the Journal of the Royal Agricultural Society.

‡ As, for instance: 1598.—4 hens, a cock, and a maund, 2s. 1614.—A cock of hay and an English Testament, 13s. 4d. 1617.—A cock, a hen, and 3 pot kilps, 12d. 1628.—3 hens, a cock, and a cradle, 2s. 6d. 1637.—A burding pece and a rood of fough, 6s. 8d.; an acre of meadow in the close and a long table, 8s.

§ “Rural Economy in Yorkshire in 1641.”—Surtees Society, vol. xxxiii., note on page 22.

below the real current value of the articles. We know, indeed, how often, in these days, a professional appraiser passes over articles of worth, and lumps them together at much beneath their value, "because it is only for probate;" and that to defraud Government, or its representative the tax-gatherer, is considered no breach of the Eighth Commandment. From this opinion, however, as regards former days, I humbly beg to differ; because occasionally there is rolled up with the Valuation a Sale-book, a list of the price each article had fetched at a public auction; and the difference was at most 5 per cent. Again, as the appraisers were near neighbours, and staked their "honesty" on the fidelity of their Valuation, they would hardly be likely to go very far wrong: especially in cattle; for what the price of an ordinary cow is, must ever be a matter of notoriety, and much below that they would not venture to descend; except where some defect called for a depreciating remark; such as "a sturdy why 10s.; 5 pigges, whereof one is like to die;" or, "an acre of wheat on the ground, unlikely." Besides, the Inventories written on paper were sent to the Registrar to be corrected previous to being engrossed, and in many cases his pen has been drawn through particular sums, as being too small, and in the parchment copy a larger amount is substituted.* But allowing this opinion its full weight, the most that it proves is this—that we have here, carefully contrived so as to deceive posterity, and cheat the vigilant eyes of two Ecclesiastical lawyers, who had a per centage on the sum total, the minimum price which the consciences of honest men would allow them to put upon the articles they had undertaken to appraise.

As far as the prices of Cattle, Household Furniture, and other produce are concerned, I feel little hesitation in relying on them. I do not feel the same confidence with respect to Corn, from the variety of measures employed, and the occasional uncertainty as to their precise extent. It is well known that a quart bottle does not always contain an imperial quart; nor is it uncommon to find Butter sold in two neighbouring markets at the same price per pound, though the one consists of twelve ounces, and the other of sixteen. We have bushels of fifty-six, as well as of sixty pounds; and the number of stone to the "tub" of potatoes varies in different counties; nor must we forget the difference between the "stricken" bushel, and the "upheaped" bushel, abolished in 1834; for this last was equal to six pecks. In these Inventories, besides the peck, bushel, sack, and quarter, there occur frundells, loads, metts, strokes, and

* This occurs very often in the documents at Snaith, where may be found rolled together the original Inventory on paper; one, and sometimes two parchment duplicates; and also (different as is the case at Doctor's Commons, see the evidence of Mr. W. M. Paine, 14th July, 1857, in the Shrewsbury Peerage Case Report. p. 115,) the original Will on paper, and an engrossed parchment copy of it.

windles. Now it appears from the published Glossaries, and also from the documents themselves, that while a frundell is always two pecks, a mett is sometimes one bushel, generally two, and sometimes four; a stroke is sometimes a half, sometimes a whole bushel; and possibly the present peculiarity of Snaith weights and measures, viz.; that a bushel equals six pecks of meal; and that while a load is three bushels of corn it is six bushels of malt, then prevailed. A windle seems to be two bushels of corn and one of meal. Fortunately, the exact size of these is in many cases solved by the price per quarter being also quoted; for the Inventories are often so minute that the exact amount of Corn in each barn or granary, and its value, is distinctly specified.

The author of the "*Chronicon Pretiosum*" informs us (p. 129), that there are each year two prices of corn, one of Lady-day, the other of Michaelmas, and that he has taken the average of the two; but the same plan has not been adopted in the construction of these tables. The reader may easily find out for himself, by help of the above and similar works, which price is quoted; and should he find a great difference between these tables and others, already in print, let him weigh well the following considerations:—1st, That an out-of-the-way locality is always cheaper than towns and large markets, and this was, up to a very recent period, emphatically true of the Snaith district. 2nd, That it is very difficult to say whether the corn was threshed or not; and in the latter case, the cost of the future labour must be added to the price.* 3rd, That even in this small island, rain and snow are very unequally distributed. We know that every farmer has not the same profit on his corn, nor the same profit in proportion every year; and we know not, at this distance of time, what accidents of drought or flood, to which last much of the district was peculiarly exposed, raised the prices in particular townships. For while a wet year would drown the clays, it would exactly suit the sandy soils: and though the greater part of the jurisdiction is Silt and Peat, a considerable portion is the Red Marl and Gypsum, or Red and White Sandstone and Conglomerate of the Lias formation. 4th, That an immense improvement has been effected in the quality of the soil by drainage, and the process of "warping," which originated within its limits,† and in the nature of the highways—by converting the clay lanes into stone roads. The corn grown previous to these two important changes would not find its way to distant markets at all, because it would be no better than supplies nearer the

* The cost of threshing in 1628 was from 4*d.* to 8*d.* per quarter, with a sheaf of straw per week. Hand threshing recently averaged 4*s.* per quarter; a quarter of corn may now be threshed by steam for 1*s.* 9*d.*

† See "*Hunter's South Yorkshire*," I. 174. "*Transactions of Society of Arts*," vol. xliii.

mart, and therefore would not pay for the additional expense of carriage. 5th, That while *Old Wheat* might be valued at Ousefleet, at the price current at the preceding Lady-day, *New Wheat* might be appraised at Heck at the Michaelmas market price. And that many seeming difficulties might be explained by the fact, (did we know in what year and in what grain the failure existed,) that a particular crop may have been deficient, though the harvest of other cereals was excellent: just as beans have failed in Yorkshire this year, though wheat is superabundant. 6th, That markets, thanks to telegraphic communication, are much more equalized now than formerly; the price depending less upon the whims of bakers and their customers than upon the superior quality and supply of the grain grown in one county over another. In 1641, Barley was selling in Norfolk for 14s., and in Yorkshire for 22s.; nay, in the East Riding of Yorkshire itself, Barley that would not sell at Malton for 20s. went off at Pocklington at 21s. 7th, That no distinction is made in the Inventories between the different kinds of *Wheat*, considerable as was, and is, the difference in the price of them. That as to *Rye*, which was used largely in bread-making, before deciding as to its price being too high, or too low, we ought to know how far the great demand for it could be supplied in the district; for some persons (just as the Irish preferred bad potatoes to good Indian corn) would rather pay dear to gratify their palate, than live at a cheaper rate on equally nourishing but less dainty fare; and that as to *Barley*, we are not told whether it is for malting or for grinding, though the difference in price, as now, would at that time be considerable. And again, the price per quarter is sometimes of grain *sown*, and we cannot say whether the cost of sowing be included in the price; it would appear so. 8th, In defence of the prices of Oatmeal quoted, I may express my belief that the peck of Meal weighs more than the peck of Corn; for in 1617, "two little pecks of Meal" are expressly mentioned. Although the value quoted may be the retail not the wholesale price; although there is great loss in the manufacture of Oatmeal, and the miller, who changed one-ninth part for flour, might reasonably demand a greater quantity of malture for his additional trouble in the preparation of Oatmeal (eight processes are described by Gervase Markham); and although the cost of carriage to and from the Lord's Mill be taken into consideration,—the advanced cost of Oatmeal over the grain is too high to admit of the supposition that the weight of the quarter is identical. The disproportion is too large even if we allow Markham's words their full weight. "Oates," says he, "are of all manner "of grain the cheapest; * * but the Oatemeale which is drawn from "them being the heart and kernell of the Oate, is a thing of much "rarer price and estimation." ("Country Contentments," Lond., 1623, p. 220.) Lastly, while occasional entries in other tables

coincide with these, the notices of Corn found in "Miller's Doncaster" come very near the corresponding prices at Snaith; and the fact that the nearer home the nearer the price, is a strong argument for the general correctness of these tables; although at this distance of time the causes of cheapness and high rates are not easily ascertained, and the most plausible theories, can, perhaps, be little more than guesses at truth.

I make no doubt but that the actual market prices were set upon the Corn; because it would be easier for appraisers, who were anxious to keep down the sum total, to favour the widow of the deceased by estimating the unthreshed Corn, the quantity of which the Registrar could not know, at less than its real amount, than to understate the selling price, which he would make it his business to know.

But since my object has been to furnish data for inquiry rather than to promulgate theories, I will but refer to the sensible and suggestive remarks of Mr. Pouslon:—"In comparing the price of any articles, the standard must be found in the necessities of life and not in money. Almost from the earliest period, a labourer in husbandry has received somewhere about the price of two bushels of Wheat for a week's work; the time when his wages would procure him more were years of plenty, those when they would not purchase so much years of scarcity. There is a self-adjusting principle, operating silently but certainly age after age, for the production of this effect; and a great part of the science of political economy as far as regards the value of the circulating medium, resolves itself into this simple proposition." "Holderness, I." p. 214-15.

It only remains for me to add the expression of my belief, that the miscellaneous extracts, which read like a catalogue of a London pawnbroker's stock, will interest a large proportion of those who examine these pages, and to tender my acknowledgments to the Registrar, and Official of the Court.

The Peculiar and Spiritual Jurisdiction of Snaith comprise the parishes of Snaith and Whitgift, an area of 41,990 acres,* and an

** Places within the Jurisdiction of Snaith.*

An asterisk (*) prefixed shows the Chapelries. The letter (v) appended shows the parish of Whitgift.

*Armin	Gowdall	Potter Closes
Balne	Great Heck	Queousque
Balnecroft	*Hensall	*Rawcliffe
Candy House (Carleton)	*Hook	Rawcliffe Bridge
*Carleton	Little Heck	Reedness v
Coates Hall	Mawgre v	*Snaith
Cote House (Armin)	Morram	*Swinefleet v
Cowick	New-bridge	Turnbridge
Dikesmarsh	Ousefleet v	Weeland
*Goole	Ousefleet Grange v	Westbank
Goole Hall	Phipping Park	*Whitgift v
Goolefield Houses	*Pollington	

increasing population of above eleven thousand souls. It is bounded on the North by the River Aire, commencing at Temple Reach; by the parishes of Brayton, Selby, and Drax, and by the Rivers Aire and Ouse: on the East by the Adlingfleet drain and the County of Lincoln: on the South by the parishes of Thorne and Fishlake, and the River Went. Its Western boundaries are the Fulham or Blow-well drain, the parishes of Womersley and Kellington. It thus occupies a principal portion of Lower Osgoderosse, but the township of Carleton, a portion of which is detached by the parish of Drax, is in the Wapentake of Barkston Ash. The chapelries, townships, hamlets, and detached houses, whose name is specified in these Inventories will be found in another page. But there are Inventories and prices of goods situate at Adlingfleet, Bolton Percy, and Sikehouse, in the County of York; at Crowle, Donnington, and Twymore, in the County of Lincoln.

The Peculiar belonged to Selby Abbey, but the profits were returned as "nulla" in the twenty-sixth of Henry the Eighth, and accordingly we find the earliest Inventory and Will to be dated 1568, and the earliest bond 1570. One of the seals of the office, however, is, on a shield a fret, with the letters G, S, and the date 1547.

The Wills and Inventories are arranged in bundles under their respective years, are in perfect order, and excellent preservation. The number down to the year 1721 is 2,960. It is to be regretted that no Inventories are in existence between the years 1668 and 1678.

From the Crown, through the families of Rich, Jobson, Waller and Wormley, this Jurisdiction has descended to its present Proprietor, George John Yarburgh, Esq., of Heslington Hall, near York, for whose ready permission to print these extracts the Editor's best thanks are due. For a few from the Selby Peculiar he has to express his obligations to Mr. Mills of York, late Registrar of that Court.

II.—AGRICULTURAL PRODUCE AND LAND.—*Corn; Hay; Wool; Hemp; Land per Acre; Fallows; Manure; Turf; Wood; Timber; and Coals.*

The Prices of Eight of the leading kinds of Grain have been placed in a Tabular Form as the most convenient mode of statement.

The Table is as follows:—

(1.) PRICES OF GRAIN.

1	2	3	4	5	6	7	8	9
Years.	Wheat.	Barley.	Oats.	Rye.	Malt.	Beans.	Oatmeal.	Hempseed.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1568	....	10 -	....	....	....	....	....	....
1571	....	13 4	....	10 -	....	....	....	....
1573	....	....	5	13 4	....	....	....	....
1575	....	12 3	....	....	11 3	10 -	....	....
1577	....	....	....	16 -	....	....	....	....
1578	{	10 -	....	....	....	14 6	....	....
1579	{	16 -	....	....	....	21 8	....	....
1580	{	8 -	6 8	16 -	....	8 -	....	8 -
	{	9 -	....	....	....	10 -	....	....
1581	{	13 4	....	18 8	8 9	....	21 4	13 4
	{	....	....	....	....	....	....	16 -
1582	{	18 8	10 -	....	13 4 ^a	10 -	24 -	10 -
	{	20 -	13 4	....	13 4 ^b	....	....	....
	{	21 4	14 -	....	15 -	....	....	....
	{	24 -	....	....	8 8	....	....	....
1583	{	18 -	12 -	6 -	....	13 4	12 2	29 4
	{	20 -	14 8	....	....	....	9 5	....
	{	32 -	19 -	....	....	....	....	10 8
1584	{	16 -	9 -	6 8	16 -	....	8 -	21 4
	{	....	10 -	....	13 4	....	10 -	....
	{	....	12 -	....	....	....	....	....
1585	10 - ^d	10 8	7 6	12 6	10 -	....	....	8 -
1586	{	20 - ^e	6 -	....	18 8	18 -	12 -	32 -
	{	....	10 -	....	26 8	32 -	24 -	....
	{	....	13 4	....	32 -	16 -	....	....
	{	....	24 -	....	....	....	....	....
	{	....	26 8	....	....	....	....	....
1587	{	....	10 -	....	....	16 -	....	16 -
	{	....	12 -	....	....	24 -	....	....
	{	....	13 4	....	....	....	....	....
	{	....	24 -	....	....	....	....	....
	{	....	26 8	....	....	....	....	....
1588	{	20 -	9 -	7 6	18 -	10 -	9 -	24 -
	{	24 -	10 -	....	....	12 -	10 -	18 8
	{	....	13 4	....	....	14 -	14 -	....
	{	16 - ^f	....	....	....	15 -	16 -	....
1589	{	20 -	11 -	5 -	13 4	11 -	12 -	24 -
	{	....	12 -	....	....	12 -	13 4	....
	{	....	13 4	....	....	13 -	14 -	....
	{	....	18 4	....	....	15 -	....	....

^a Ground Malt.^d Corn.^b Barley Malt.^e Wheat and Rye.^c Bread-corn.^f Bread-corn.

	1	2	3	4	5	6	7	8	9
Years.	Wheat.	Barley.	Oats.	Rye.	Malt.	Beans.	Oat-meal.	Hemp-seed.	
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	
1590 {	30 -	13 4	6 -	16 -	13 4	12 -	40 -	16 -	
	15 - ^a	15 -	9 6	18 8	14 -	16 - ^b	....	....
	26 8	....	9 -	20 -	15 -	....	....	....
	....	....	....	21 4	20 -	....	....	....
1591 {	24 -	10 -	11 4	24 -	20 -	13 4	32 -	16 -	
	12 - ^a	11 6	14 -	25 7	....	20 -	25 4	....
	....	16 8	16 -	....	....	24 -	....	....
	....	17 8	....	....	....	26 8	....	....
	....	20 -	....	....	....	....	....	....
1592 {	18 8 ^c	7 -	5 -	10 -	8 -	6 8	24 -	10 8	
	10 - ^d	8 4	8 - ^e	13 4	12 -	10 -	26 8	13 4	
	10 8	10 8	6 8 ^e	....	10 - ^f	13 4	32 -	16 -	
	12 -	16 -	....	....	....	....	21 4	....
	13 4	9 6	....	....	....	....	....	....
1593 {	....	8 -	....	8 -	9 -	8 - ^g	....	10 8	
	....	16 -	....	9 -	18 -	....	....	....
1594 {	....	9 4	....	13 4	17 8	8 -	....	12 -	
	....	11 8	....	16 -	....	....	....	....
1595 {	....	13 6 ^h	....	26 8	....	16 -	....	....
	....	17 9	....	32 -	....	20 - ^g	....	....
	....	20 -	....	....	....	....	....	....
1596 {	20 - ⁱ	10 10	8 -	24 -	17 -	16 -	32 -	12 -	
	40 -	15 -	10 -	26 8	18 -	....	....	10 8	
	....	16 -	16 -	....	....	....	....	....
	....	19 -	....	....	....	....	....	....
	....	20 -	....	....	....	....	....	....
	....	26 8	....	....	....	....	....	....
	....	33 -	....	....	....	....	....	....
	....	32 - ^j	....	....	....	....	....	....
1597 {	40 -	20 -	6 8	20 -	....	20 -	....	21 4	
	....	24 -	....	14 8	....	16 -	....	24 -	
	....	26 8	....	35 6	....	....	....	....
	....	40 -	....	....	....	....	....	....
	....	53 -	....	....	....	....	....	....
1598 {	....	21 4	5 6	24 -	....	26 8	32 -	10 8	
	....	31 -	9 6	40 -	....	....	....	32 -	
	....	13 4 ^j	....	....	....	....	....	....
1599	....	....	8 -	....	....	26 8	....	10 8	
1600 {	....	10 -	9 7	48 -	....	....	....	10 8	
	....	12 -	24 -	49 4	....	....	....	16 -	
	....	15 -	....	....	....	....	....	21 4	

^a Bread-corn.^b Beans and Barley.^c Corn.^d Wheat and Rye.^e At the kilns.^f Barley Malt.^g Beans and Rye.^h Barley and Bland-corn.ⁱ Corn.^j Seed Barley.

I	2	3	4	5	6	7	8	9
Years.	Wheat.	Barley.	Oats.	Rye.	Malt.	Beans.	Oatmeal.	Hempseed.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
1601 {	13 4 ^a	10 -	....	30 -	20 -	16 -	....	8 -
	26 8	11 -	....	40 -	....	....	....	10 8
	12 9 ^a	22 -	....	26 8	....	....	....	16 -
	26 8 ^a	30 -	....	....	....	....	....	32 -
1602 {	....	....	....	26 8	20 -	16 -	....	8 -
	....	....	....	....	....	....	....	10 8
1603 {	....	8 9	....	18 8	14 -	13 4	....	....
	....	13 4	....	....	10 8	....	....	....
	....	26 8	....	....	....	....	....	....
1604 {	....	10 -	5 -	12 -	14 -	....	21 4	10 8
	....	....	13 4	13 8	....	....	....	....
1605 {	10 - ^b	9 -	7 -	20 -	13 4	15 -	30 -	10 8
	24 -	13 4	8 -	13 4	....	....	....	16 -
	12 -	15 -	....	....	....	....	....	....
	....	16 -	....	....	....	....	....	....
1606 {	....	8 -	6 -	....	12 -	....	21 4	10 8
	....	12 4	....	....	....	....	....	....
1608 {	....	20 -	....	24 -	....	32 -	26 8	5 4
	....	....	....	26 8	....	16 -	....	....
1609	....	....	....	....	12 -	30 -	26 8	....
1610 {	16 - ^c	10 -	10 8	20 -	13 4	12 -	....	21 4
	....	13 4	....	....	18 -	12 - ^d	....	....
	....	14 -	....	....	20 -	....	....	....
	....	16 -	....	....	....	....	....	....
1611	32 -	....	8 -	....	....	....	....	20 -
1612 {	32 -	13 4 ^e	....	25 -	22 -	22 3	....	16 -
	....	20 -	....	....	24 -	32 -	....	....
	....	26 8	....	....	....	....	....	....
1613 {	34 8	13 4	14 -	32 -	14 3	16 -	....	10 -
	....	24 4	....	....	18 8	20 -	....	16 -
	....	20 - ^f	....	....	20 -	....	....	21 4
	....	....	....	....	24 4	....	....	....
	....	....	....	....	26 8	....	....	....
1614 {	35 6	26 8	10 -	32 -	20 -	....	40 -	12 -
	40 -	40 -	....	....	26 8	....	....	26 8
1615 {	....	20 -	9 4	26 8	20 -	16 -	40 -	....
	....	28 -	....	....	....	20 -	....	....
1616 {	26 8	10 8	9 3	18 2	....	16 -	....	26 8
	32 -	20 -	....	20 -	....	....	....	16 -
	16 - ^g	....	....	22 -	....	....	....	....
	25 - ^g	....	....	32 -	....	....	....	....

^a Bread-corn.^b Corn.^c Bread-corn.^d Seed Beans.^e Lincolnshire.^f In Malting.^g Corn.

1	2	3	4	5	6	7	8	9
Years.	Wheat.	Barley.	Oats.	Rye.	Malt.	Beans.	Oat-meal.	Hemp-seed.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1617 {	16 - ^a	....	8 -	21 4	26 8	....	....	16 -
	....	....	....	24 -	....	....	....	....
	....	....	....	26 8	....	....	....	....
1618 {	....	20 - ^b	....	22 8	20 -	10 -	24 -	21 4
	....	....	....	32 -	....	....	....	32 -
1619	21 4	....	....	16 -	13 4	....	22 8	18 -
1620	....	10 -	....	....	....	....	....	20 -
1621	....	10 -	....	10 -	....	....	....	....
1622	25 -	22 -	....	....	26 8	26 8	40 -	....
1623 {	35 4	33 4	....	32 - ^c	....	....	40 -	10 8
	40 -	20 -	....	48 - ^d	....	....	....	....
1624 {	27 -	18 -	6 8	19 6	16 -	16 - ^e	21 4	10 8
	32 -	20 -	10 -	....	20 -	13 4 ^f	24 -	....
	36 -	....	....	....	....	....	....	....
1625 {	44 -	15 - ^g	....	24 -	26 8	32 -	21 4	....
	64 -	16 -	....	....	....	....	....	....
	....	18 -	....	....	....	....	....	....
1626 {	....	15 -	8 -	20 -	....	16 4	26 8	10 8
	....	26 8	....	....	....	....	....	13 -
1627 {	26 8	10 4 ^h	....	26 8	16 -	....	21 4	20 -
	45 4	13 4	....	....	....	....	....	....
	....	16 0	....	....	....	....	....	....
1628	....	13 4	....	16 -	17 -	16 -	....	....
1629	26 8	18 -	7 -	19 9	....	13 4	....	....
1630	30 -	....	....	....	....	....	....	10 8
1631	....	26 8 ^b	....	....	....	....	....	10 8
1632 {	52 -	17 6	16 -	29 - ⁱ	....	13 4	....	20 -
	....	....	8 -	....	....	16 -	....	16 -
1633 {	....	20 -	13 4	26 8	....	....	....	....
	....	26 8	....	32 -	....	....	....	....
1634	....	17 4	....	....	20 -	21 4	....	13 4
1637 {	40 -	25 -	12 -	28 -	28 -	26 -	36 -	15 -
	....	26 8	....	....	....	....	....	34 -
1638	53 4 ^k	34 6	13 4	....	37 7	33 4	32 -	10 8
1639 {	50 8	17 9	8 -	....	25 -	18 8	....	....
	....	....	....	....	....	34 -	....	....
1640	20 -	12 -	....	19 -	20 -	16 -	....	13 4

^a Corn.^b Barley and Malt.^c Rye and Barley.^d Rye and Pease.^e Beans and Barley.^f Beans and Fitches.^g Seed Barley.^h Barley and Bland-corn.ⁱ Meal.^k Best.

1	2	3	4	5	6	7	8	9
Years.	Wheat.	Barley.	Oats.	Rye.	Malt.	Beans.	Oat-meal.	Hemp-seed.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1641 {	20 -	14 6	....	....	....	....	32 -	....
	....	18 -	....	....	....	....	....	....
1642 {	....	25 4	10 -	26 8	20 -	18 -	....	....
	....	....	....	....	25 -	....	....	....
	....	....	....	....	26 8	....	....	....
1643 {	29 4	20 -	....	26 8	....	....	....	....
	32 -	....	....	....	....	....	....	....
1644 {	26 8	22 3	7 -	13 4	20 -	10 -	....	16 -
	....	....	....	19 9	....	13 4	....	....
1645 {	24 -	26 8	....	20 -	24 -	....	....	....
	33 4	....	....	22 -	....	....	....	....
1646 {	42 8	20 -	....	24 -	22 -	26 8	....	....
	....	....	....	26 8	....	....	....	....
	....	....	....	32 -	....	....	....	....
	....	....	....	34 8	....	....	....	....
1647 {	....	....	....	....	20 -	....	32 -	....
	....	....	....	....	32 -	....	53 -	....
1648 {	....	20 -	....	....	....	....	....	....
	....	34 -	....	....	....	....	....	....
1649	60 - ^a	....	....	48 -	....	....	80 -	....
1650	45 - ^a	....	....	....	22 -	16 -	....	....
1651	....	19 -	....	29 -	22 -	16 -	....	....
1652	....	....	7 -	20 -	....	....	....	....
1654	16 -	....	....	12 3	13 4	10 10	....	....
1656	32 -	17 4	....	....	....	18 - ^b	....	....
1657 {	....	16 -	....	30 -	....	....	....	....
	....	24 -	....	....	....	....	....	....
1658 {	40 -	16 -	8 -	29 4	....	20 -	....	....
	....	22....	....	32 -	....	....	....	....
1659 {	37 4	22 -	12 -	34 8	....	....	21 4	21 4
	....	26 8	13 4	....	....	....	....	....
	....	....	16	....	....	....	....	....
	....	....	18 4	....	....	....	....	....
1661 {	32 -	36 8 ^c	16 - ^c	40 -	40 - ^d	....	24 -	....
	....	....	20 - ^d	....	....	....	....	....
1662	....	....	....	21 4	....	21 4	....	....
1663	37 4	16 -	....	26 8	....	....	....	26 8
1665	....	....	26 8 ^e	....	....	....	....	....

^a Wheat and Rye.
^d Old.

^b Beans and Pease.
^e Oats were 2*l.* per acre this year.

^c New.

	1	2	3	4	5	6	7	8	9
Years.	Wheat.	Barley.	Oats.	Rye.	Malt.	Beans.	Oat-meal.	Hemp-seed.	
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	
1666 {	21 9 ^a	13 -	6 3	18 -	....	16 -	....	....
	....	....	....	20 -	....	....	....	....
1667 {	....	....	....	13 4	22 -	....	....	....
	....	....	....	17 6 ^a	26 -	....	....	....
1668 {	....	....	6 8	....	16 -	10 6	....	....
	....	....	....	....	18 -	....	....	....
1678 {	21 4	....	....	18 8	16 -	13 4	....	....
	24 -	....	....	....	....	....	....	....
1679 {	26 8	....	9 -	16 -	....	....	26 8	....
	23 4	....	....	21 4	....	....	....	....
1680 {	21 -	12 2 ^d	7 6	15 -	16 -	16 -	....	29 4
	24 -	....	....	....	....	....	....	....
1681 {	....	....	8 -	20 - ^a	16 -	13 4	....	....
	24 -	....	....	24 -	20 -	....	....	....
1682 {	24 -	20 -	10 -	....	20 -	16 -	32 -	34 8
	25 -	....	12 -	....	....	....	28 -	32 -
	26 8	....	....	....	....	....	40 -	....
1683	21 4	....	....	21 4	....	....	....	....
1684 {	24 -	10 8	8 -	....	....	28 -	....	....
	....	13 -	....	....	....	....	....	....
1685	28 -	....	9 -	....	24 -	....	....	....
1686 {	20 -	....	6 8	15 - ^a	15 -	....	....	....
	....	....	8 -	....	16 -	....	....	....
1687	....	13 4	....	20 -	....	....	....	....
1688	40 -	12 -	....	....	....	....	....	....
1692	....	12 6	....	13 4	....	....	....	....
1694	....	18 -	....	34 8	20 -	....	....	....
1695	....	....	6 4 ^b	....	....	....	....	....
1697	....	....	....	....	27 -	....	....	....
1700	21 4	....	10 -	24 -	20 -	....	....	....
1703	....	13 4	....	12 - ^c	22 -	....	....	....
1704	....	....	....	....	16 -	13 4	....	....
1705	....	10 -	7 -	21 0	....	....	....	....
1707	....	12 -	....	....	....	....	....	....
1708	....	16 -	8 -	30 -	....	13 4	....	....
1712	....	13 9	....	....	....	....	....	....
1715	....	....	....	....	30 -	....	....	....

^a Wheat and Rye.
^c From Selby Register.

^b Seed Oats.
^d Unthreshed.

1	2	3	4	5	6	7	8	9
Years.	Wheat.	Barley.	Oats.	Rye.	Malt.	Beans.	Oat-meal.	Hemp-seed.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
1716 {	....	13 6 ^a	....	....	....	....	....	....
	....	15 - ^a	....	....	....	....	....	....
	....	20 - ^b	....	....	....	....	....	....
1717	24 -	....	....	....	....	16 -	....	....
1718 {	26 8 ^c	9 4 ^c	....	21 6 ^c	....	....	....	....
	....	16 - ^c	....	....	....	....	....	....
1719 {	....	....	8 6	....	22 -	15 4	....	....
	....	....	....	....	....	20 -	....	....
1721 {	26 8	....	7 -	22 8 ^c	29 -	....	....	....
	....	....	10 - ^c	24 - ^c	16 - ^d	....	....	....
1722	24 - ^e	....	....	....	....	....	....	....
1723	26 8	11 -	8 -	20 -	20 -	....	....	....
1724 {	22 6	12 -	10 -	20 -	....	21 4	....	....
	....	....	....	....	....	18 6	....	....
1725	....	16 -	....	18 8	....	....	....	....
1727	....	10 -	....	....	....	....	....	....
1728	....	....	....	....	32 -	....	....	....
1731	....	....	6 -	13 4	....	13 4	....	....
1732 {	18 8	20 -	8 -	13 4	....	16 -	....	....
	19 8	....	9 -	....	....	....	....	....
1734	20 -	....	....	....	....	....	....	....
1738	25 -	....	....	....	26 8	....	....	....
1740	32 -	14 -	12 -	21 4	....	....	....	....
1741	....	....	28 -	....	....	....	....	....
1742 {	24 -	16 -	9 -	18 8	....	....	....	....
	25 4	....	9 6	....	....	....	....	....
1743	21 -	17 3	....	....	27 -	....	....	....
1744	17 6	....	6 8	....	21 6	....	....	....
1748	....	....	7 -	....	22 -	....	....	....
1749	....	18 6	9 -	18 8	....	....	....	....
1752	26 8	....	10 -	....	....	....	....	....
1755	21 -	....	....	....	....	20 -	....	....
1758 {	29 4 ^e	15 - ^f	10 -	....	....	....	....	....
	24 -	13 4 ^g	7 -	....	....	....	....	....
	....	19 - ^h	....	....	....	....	....	....
1760	24 -	....	....	....	....	....	....	....
1761	....	....	8 -	....	....	18 8	....	....
1772	....	....	18 -	....	31 6	27 6	....	....
1783	44 - ⁱ	....	13 -	....	....	33 4	....	....

^a March Barley.^b December Barley.^c From Selby Register.^d Duty unpaid.^e Wheat and Rye.^f Bad Barley.^g November Barley.^h Wheat and Rye.

The following Quotations per Quarter may be added to those given above:—

	s.	d.		s.	d.		s.	d.
Skegg 1580	4	6	Skegg 1595	5	—	Skegg 1614	6	8
" 1584	5	6	" 1597	8	—	" 1616	12	—
" 1586	6	8	" 1598	5	6	" 1617	6	8
" 1588	5	4	"	6	8	" 1623	10	—
" 1590	6	8	" 1602	5	4	" 1625	5	—
" 1591	8	—	" 1608	6	8	" 1627	6	8
"	10	—	" 1610	6	—	" 1632	5	6
" 1592	6	8						

	s.	d.
Skegg Malt 1605	6	8
" 1608	6	8
" 1614	8	—

	s.	d.
Haver Malt 1582	8	—
" 1597	16	—
"	20	—
"	26	8

Skegg Meal 1611	32	—
-----------------------	----	---

Haver Seed 1589	8	—
-----------------------	---	---

	s.	d.		s.	d.		s.	d.
Pease 1583	14	—	Pease 1597	20	—	Pease 1645	16	—
" 1586	20	—	" 1611	16	—	" 1658	16	—
"	24	—	" 1612	16	—	"	21	4
" 1587	24	—	" 1614	16	—	" 1659	23	6
" 1588	13	4	"	22	—	" 1686	20	—*
"	24	—	" 1623	16	—	"	24	—
" 1590	20	—	" 1624	17	—	" 1707	10	8
" 1596	18	8	" 1643	13	4	" 1727	16	—

	s.	d.		s.	d.		s.	d.
Linseed 1584	24	—	Linseed 1686	26	8	Linseed 1724	40	—
" 1588	32	—	" 1699	40	—	" 1728	64	—
" 1592	10	8	" 1715	46	8	" 1732	55	—
" 1618	16	—	" 1719	40	—	" 1751	50	—
" 1680	20	—	" 1721	32	—†			

	s.	d.
Bland-corn	1591	20 —
"	1597	20 —
"	1732	18 4

	s.	d.
Bland-corn Malt	1589	6 8
"	1591	16 4
"	1592	13 4

	s.	d.
Bigg	1598	24 —
"	1605	14 —
"	1627	16 —

Mustard-seed	1603	8 —
-------------------	------	-----

Crapps	1622	13 4
--------------	------	------

	s.	d.
Meal	1624	24 —
"	1626	19 4
"	1646	32 —

	s.	d.
Wheat-meal	1628	32 —
"	1694	42 8

	s.	d.
Rye-meal	1680	16 —
Maslin	1678	20 —
"	1680	18 8
"	1721	21 4

Bread-corn and Maslin	1627	16 —
--------------------------------	------	------

Bread-corn	1641	10 —
------------------	------	------

Corn	1632	16 —
------------	------	------

"	1638	40 —
---------	------	------

"	1641	16 —
---------	------	------

Oat-malt	1638	16 5
----------------	------	------

"	1644	6 —
---------	------	-----

Rape	1682	20 8
------------	------	------

Rape-seed	1721	28 —†
-----------------	------	-------

Blendings	1740	14 4
-----------------	------	------

In 1781, 6 Quarters of Wheat and 20 Quarters of Oats are valued at 21*l.*; and Potatoes at 7*s.* per sack.

* White Pease.

† From Selby Register.

(2.) *Prices of CORN Unthreshed.*

It appears from the Snaith Court Rolls that a stone of barley-malt was worth 2s. Nov. 26, 1452; and that a quarter of barley was valued at 4s. May 18, 1454. The threave consisted of two stookes, and each stooke of twelve sheaves.

The threave of rye is valued, in 1579, at 1s. 4d.; in 1585, 4s.; in 1586 and 1613, at 6s. 8d.; at 2s. 6d. in 1621, 1625; and 6s. in 1659; being specially marked as mown. In 1624 wheat is 3s. 4d. and in 1659 oats 2s. 8d. per threave.

Skegg was 3s. 4d. in 1586, and 8½d. per threave in 1614. In 1679 unthreshed pease were 5s., and unthreshed oats 3s. per waine load; in 1680 unthreshed barley 12s. 2d. per quarter; and in 1586 barley straw and pease straw were each 2d. per threave. In 1760, 1766, straw was 1s. per threave.

(3.) *HAY per Load.*

	s.	d.		s.	d.		s.	d.
1578.....	5	—	1610.....	6	8	1656.....	13	4
1584.....	7	2	1612.....	8	—	1657.....	8	—
1586.....	7	9	1613.....	5	6	1657.....	10	—
1590.....	6	8	1615.....	10	9	1658.....	7	6
1591.....	5	—	1617.....	5	6	1665.....	10	—
1591.....	6	8	1617.....	6	8	1679.....	per	—
1598.....	6	2	1629.....	5	—	1679.....	waine	6 8
1599.....	8	—	1629.....	10	—	1679.....	load	—
1601.....	14	8	1640.....	10	—	1700 (coarse)	6	8
1604.....	3	4	1646.....	10	—	1728.....	14	6
1605.....	5	—	1647.....	10	—	1741.....	20	—
1608.....	6	8	1654.....	5	—	1751.....	15	—

Selby—1721..... 12s. per load.

(4.) *WOOL.*

For a good account of the variations in the price of Wool, and of the statutes made to encourage the trade within this realm, I would refer the reader to chapter vi., p. 192, of "Sheep, their Breeds, Management, and Diseases," published under the superintendence of the Society for the Diffusion of Useful Knowledge.

I give a table of the price per stone, adding a few notices which would not resolve themselves into it.

Table of the Prices of Wool per Stone.

	s.	d.		s.	d.		s.	d.
1583.....	6	8	1597.....	7	—	1639.....	10	—
1583.....	8	—	1599.....	8	—	1639.....	10	10
1583.....	9	—	1610.....	7	—	1643.....	7	—
1585.....	5	4	1610.....	16	—	1644.....	6	—
1586.....	5	10	1613.....	4	8	1650.....	10	—
1586.....	4	8	1614.....	9	4	1651.....	9	9
1588.....	4	6	1616.....	10	—	1656.....	8	—
1590.....	8	—	1617.....	9	4	1659.....	8	—
1590.....	10	—	1622.....	6	—	1659.....	14	—
1591.....	7	—	1623.....	3	—	1687.....	6	—
1592.....	8	—	1623.....	7	—	1697.....	10	—
1592.....	6	8	1626.....	14	—	1719.....	10	—
1593.....	8	—	1631.....	12	—			

- 1584.—18 fleeces, 12s.; 2 wool combs, 2s.; 1 fleece, 1s. 4d.; 36 lbs. of dressed wool and 1½ stone of undressed, 1l. 10s.; 4 lbs. of coarse wool, 1s. 8d.
- 1588.—11 lbs. of wool and 3 yards of gray cloth, 6s. 8d.
- 1595.—2 fleeces of wool, 12d.; 1½ stone of woollen yarn, 6s.
- 1610.—5 lbs. of woollen yarn, 4s.
- 1614.—1 stone of lambe wool, 7s.
- 1620.—1 lb. of blue wool, 1s.
- 1637.—2 stone of wool and some hemp, 1l. 6s. 8d.; half a stone of coarse wool, 2s. 4d.
- 1654.—2½ lbs. of woollen yarn, 3s. 9d.
- 1658.—10 lbs. of woollen yarn, 5s. 6d.
- 1647.—A pair of wooll cairdes and a paire of heme cairdes, 1s.
- 1708.—3 quarters of wool for stockings, 1s. 6d.
- 1723.—3 stone of coarse wool, 12s.
- 1783.—30 lbs. of combed wool, 1l. 5s.; 24 stone of flies wool at 6s. and 3s. per stone, 7l. 10s.; 39 lbs. of white single worsett, 3l.; 10 lbs. of coloured stocin worsett, 1l. 1s.

(5.) MANURE.

	£	s.	d.		£	s.	d.
1581—40 load.....	-	2	-	1658—6 load.....	-	6	-
1584—The midden stead....	-	5	-	1662—{ Manure in the broggeries and in the footstead..... }	1	10	-
1591—12 load.....	-	4	-	1679—400 load	4	10	-
1609—10 „	-	1	2	1681—{ 300 load and lead- ing of it	6	5	-
1640—2 „	-	1	-	1683—140 load	2	6	8
1652—20 „	-	13	4				
1654—16 „	-	12	-				

(6.) HEMP and LINE.

In spite of the efforts which a modern Company is making to induce the farmers to grow Flax more largely around Selby and Snaith, it is but little cultivated. It is supposed to exhaust the land so quickly that a landlord demands a consideration for his permission to grow line. But it is certain that in former years an immense quantity of it was grown in this watery district; perhaps most at Swinefleet and Redness. But in almost every inventory hemp and line are found in some form or other. The line was generally sown on barley stubble, and a good deal was grown at Carleton.

Hemp sold at 2s. per stone from 1580 to 1590. In 1591 there are three prices, 1s. 4d., 2s. 4d., and 3s. 4d.; in 1599 3s. 6d. is the price; in 1604 and 1610 2s. 6d.; in 1618 4s.; 3s. 4d. in 1626; 5s. in 1638; 4s. in 1647; 4s. 8d. in 1659; 5s. in 1679; 1s. 4d. in 1680; and in 1681 1s. 6d. Pilled hemp was, per stone, in 1590, 1s.; in 1595, 1s. 4d.; in 1632, 3s.; in 1640 and 1663, 2s. 6d.; and 2s. in 1687. Femble hemp is 1s. 6d. per stone in 1598; rope hemp 2s. in 1619 and 1725; braking hemp is 2s. 8d. in 1626; 4s. in 1632; 4s. 6d. in 1681; braked and pilled hemp was 1s. 6d. per stone in 1583. Besides, there are other measures and names of quantities, the size of which may, perhaps, be found by comparing the price of them with the price per stone.

1588.—12 load of tow, 4l. 1589.—2 stone of braked hemp, 3 stone of pilled hemp and other hemp, rayted and unrated, 1l. 5s. 1592.—A quartern of tow, 6d. 1616.—Craydes hemp, 2s.; 2 craydes, 8d. 1632.—3 score beats of hemp, 13s. 4d. 1638.—A steep fat and about 40 bottles of unpilled hemp, 1l. 10s.; 22 bundles of hemp with hardes, 2l. 1646.—7 bottles of hemp, 8s.

Flanders Line was 5s. per stone in 1582; ordinary line was, per stone, 4s. 9d. in 1591; 5s. in 1605; 4s. in 1610; 1611, 3s. 4d.; and 6s. 8d. each year from 1613

to 1654, with the exception that in 1626 it was 5*s.*; in 1644, 4*s.* In 1661 it was 8*s.*; crushed, or heckled, 5*s.* in 1680; dressed, 8*s.* in 1703; and 6*s.* in 1724, 1748.

Other notices are: 1581.—12 bottles of line, 3*s.* 1639.—16 bottles of unbraked line, 5*s.* 1697.—8 loads of line, 6*l.* 1710.—8 loads of line, 3*l.* 8*s.* 1716.—A stamp of line undressed, 5*l.*

Of Yarn and Teare we have these notices:—

- | | |
|--|--|
| <p>1581.—7 lbs. of linen yarn, 4<i>s.</i>
 1585.—A heap of yarn, 9<i>d.</i>; 18 layes of hemp-yarn, 1<i>s.</i>; 12 lbs. of line teare, 6<i>s.</i> 8<i>d.</i>; 12 hesps of harden yarn, 5<i>s.</i>
 1587.—5 hesps of yarn, 5<i>s.</i>; 11 hesps of spun yarn, 3<i>s.</i> 4<i>d.</i>
 1593.—20 lbs. of heckled line, 13<i>s.</i> 4<i>d.</i>
 1597.—10 cutts of yarn, 6<i>d.</i>
 1598.—A stone of teare, 4<i>s.</i>; 7 hesps of yarn, 3<i>s.</i> 4<i>d.</i>
 1605.—9 lbs. of line teare, 7<i>s.</i> 6<i>d.</i>; 11 lbs. of hemp teare, 5<i>s.</i> 6<i>d.</i>; 5 lbs. of linea yarn, 5<i>s.</i> 6<i>d.</i>; slippings of harden yarn, 5<i>s.</i> 6<i>d.</i>; 7 hanks of loose shyrings, 3<i>s.</i>; 24 hanks* of sack warp and 11 cutts of weft, 16<i>s.</i>; a score of sacks, weft and warp, 6<i>s.</i> 8<i>d.</i>
 1607.—Yarn in clewes, 1<i>l.</i>
 1620.—5 hesps of yarn, containing</p> | <p>30 cutts, 2<i>s.</i>; 4 score lea of hemp yarn, 9<i>s.</i>
 1630.—A stone of hards, 1<i>s.</i> 4<i>d.</i>
 1633.—8 lbs. of heckled line, some femble yarn, 3 heckles, a ripple come, and line hards, 13<i>s.</i> 4<i>d.</i>
 1646.—20 lbs. of heckled teare, 1<i>l.</i>
 1648.—A Flander's wheele, 1½ stone of line, and 24 lbs. of hemp teare, 1<i>l.</i>
 1658.—1½ stone of rope yarn, 4<i>s.</i> 6<i>d.</i>; 56 cuts of hemp yarn, 4<i>s.</i> 8<i>d.</i>
 1663.—7 score leas of yarne, 11<i>s.</i> 8<i>d.</i>
 1682.—4 hesps of yarn, 5<i>s.</i>
 1694.—60 cutts of yarn, 5<i>s.</i>
 1708.—1 lb. of blew yarn, 2<i>s.</i> 4<i>d.</i>
 1722.—2 stone of line, 10 yds. of hucka-back linen, and a spinning-wheel, 1<i>l.</i> 5<i>s.</i>
 1733.—12 hanks of yarn, 2<i>s.</i></p> |
|--|--|

(7.) *Value of LAND per Acre—CORN per Acre—MEADOW and PASTURE.*

- | | |
|---|--|
| <p>1569.—15 acres of barley, 10<i>l.</i>; 2 acres of wheat, 1<i>l.</i> 6<i>s.</i> 8<i>d.</i>; 6 acres of beans and haver, 2<i>l.</i> 13<i>s.</i> 4<i>d.</i>; 2 a. 2 r. of winter corne, 1<i>l.</i> 10<i>s.</i>; 2 a. 3 r. of ware corne, 13<i>s.</i> 4<i>d.</i>
 1570.—3 acres of fawgh, 1<i>l.</i>
 1572.—3 acres of rye sown, 1<i>l.</i> 10<i>s.</i>; 1 a. 2 r. of meadow, 7<i>s.</i>
 1577.—1 acre of beans, 16<i>s.</i>; 3 acres of meadow in Southfield, 3 roods in Snaithfield, 5<i>s.</i>; 1 a. 2 r. of wheat and rye, 4 acres of barley, haver, and pease, 4<i>l.</i>
 1578.—14 a. 2 r. of barley, sown, 15<i>l.</i>; 12 acres 3 stanges of beans, 12<i>l.</i>; 2 acres of oats, 7 acres of meadow, 3<i>l.</i> 15<i>s.</i> 4<i>d.</i>; 8 oxgangs of corn and cresse, 48<i>l.</i>; 3 acres of wheat, 3<i>l.</i>; 10 acres of beans, 6<i>l.</i> 13<i>s.</i> 4<i>d.</i>; 10 acres of meadow, 2<i>l.</i> 10<i>s.</i>; 18 a. 2 r. of barley, 16<i>l.</i></p> | <p>1579.—1 acre of meadow in the "fish youles" of Rawcliffe and 1 rood in the "middle youles," 5<i>s.</i>; 2 roods of barley, 12<i>s.</i>; 1 acre of fytyches, 13<i>s.</i> 4<i>d.</i>; 3 acres of hemp and barley, 3<i>l.</i>
 1580.—5 acres of barley with flax thereon, sown, 3<i>l.</i>; 3 acres March rye, 1<i>l.</i> 10<i>s.</i> Sept., 30 acres of blend corn and haver, 16<i>l.</i>; 16 acres of winter faugh barley, very coarse, 8<i>l.</i>; 35 acres of summer faugh barley, 30<i>l.</i>; 24 acres of beans, 13<i>l.</i> 6<i>s.</i> 8<i>d.</i>
 1581.—14 acres of beans and hemp, 14<i>l.</i>; 22 acres of blend corn, 14<i>l.</i> 13<i>s.</i> 4<i>d.</i>; 4 acres 1 rood of winter rye, 4<i>l.</i>
 1582.—5 acres of leigh land, 6<i>s.</i> 8<i>d.</i>; 2 oxgang doles and a baucke, 9<i>s.</i>; 4 acres of arable land and meadow 12<i>l.</i>
 1584.—March.—1 acre of beans and fitches, 10<i>s.</i>; 2 acres of ley in Oxney and 1 acre in Snaith Ynges, 10<i>s.</i>;</p> |
|---|--|

* It has been suggested that this word is derived from one Hanckcinus, of Brabant, in the days of Edward III. But have not such etymologists a hankering after foreign derivations? See "Allen's Yorkshire," vol. i., p. 285.

- 3 roods of haver, 6s. 8d.; 3 acres of meadow, 15s.; 2 roods of rye, sown, 13s. 4d.; 5 acres of beans, sown, 3l. 6s. 8d.; 1 acre of meadow lying in the tile pitta in the field of Armin, bought for the next crop, 9s.
- 1586.—3 roods of land for 6 years, the rent paid beforehand, 8s.
- 1587.—Sept.—9 acres of barley, 12l.; 7 acres of beans, 6l.; 4 acres of blend corn and haver, 2l. 13s. 4d.; 4 acres 1 stang of arable land for one crop, 1l. 6s. 8d.; a lease for 3 years to come of 7 acres of arable land and meadow, 5l. 5s.
- 1589.—7 acres of land, sown; 1 acre of meadow with laynes for a crop, 7l. 10s.; 2 acres of wheat, sown, 2l.; 3 acres of skag and March rye, 1l.
- 1590.—4½ acres of wheat in Baune, 6l.; 3 roods of wheat and rye in Whitlay field, 1l.
- 1591.—A five stang of beans, sown, 1l. 3s. 4d.; 5½ acres of haver, sown, 1l. 13s. 4d.; 1 acre of oats, 16s.; 7 acres of beans, 5l. 6s.; 6 acres of barley, 6l.; 2 acres of meadow, 14s.; 7 acres of haver and blend corn, 4l. 13s. 4d.; 8 acres of meadow, 3l. 6s. 8d.
- 1595.—Profit of a lease of 9 years to come of a house and 15 acres of land, 4l.; a 3 stange of beans, sown, and the gresse about it, 13s. 4d.; 6 acres of fitches, 2l.
- 1596.—A rood of wheat, 6s. 8d.; 6 acres of rye in Hensall fields, and 2 acres of skegg, 10l. Item—4 intacke gayts that the sayd testator did take and paye for for one year, 16s.; 6 acres of meadow, 3l.
- 1601.—8 acres of skag, 5l. 6s. 8d.
- 1603.—3 roods of fitches, 6s. 8d.
- 1604.—3 doles of meadow, 18s.; 8 acres of meadow inclosed, 3l. 4s.; 1 qr. oats, sown, 13s. 4d.; 5 acres of wheat and rye, 5l.; 1 acre of rye, sown, 13s. 4d.; 1 acre of meadow for 2 years, 13s. 4d.
- 1607.—2 pasture gates at Redness, 2l.
- 1610.—32 acres of barley, 42l. 13s. 4d.; 12 a. 3 r. of oats, 9l. 11s. 9d.; 5 acres of beans, 3l. 6s. 8d.; 3 acres of rye, 3l. 6s. 8d.; 6 acres of meadow in Snaith Ings, 2l.
- 1615.—2 acres of haver in the barne, 2l.; 2 acres of pease in the barn; 10s.; 7 acres of barley in the barne, 10l. 10s. 5 acres of wheat and rye in the barne, 10l.
- 1616.—4 roods of waire corn, 1l.
- 1619.—1 rood of barley and 1 selion of rye, 10s.; 3 acres of oats, 1l.; 3 acres of beans 2l.
- 1623.—½ acre of pease and ½ acre of oats at Fishlake, 1l. 6s. 8d.
- 1624.—1 acre of wheat, sown, 1l. 6s. 8d. 7 acres of oats, 9l.; 7 acres of barley, ground, 14l.; 3 acres of beans, 4l. 10s.; 15 acres of meadow, 3l. 15s.
- 1625.—A messuage, a toft, 24 acres of land, arable, meadow, and pasture, in the townfields of Whitgift, with certain pasture gaites, and one-half moore in Whitgift moores, 100l.
- 1626.—His lease of 9 roods of arable land for 3 years, 2l.
- 1628.—22 acres of meadow, 11l.; 6 cow-close gates in the cowclose of Swin-fleet, 2l. 8s.
- 1632.—5 acres of meadow and pasture ground, the rent already paid for 2 years, 5l.
- 1639.—8½ acres of barley, 20l.; 6 acres of beans 9l.; 15 acres of oats, 20l.; 3 acres of wheat and rye, 8l.
- 1642.—6 acres of summer faugh barley, 15l.
- 1644.—4 acres of land to be sold for the payment of the debts, 30l., for the lease of the messuage house at Redness, and 7 acres of land for 7 years at 7l. a year, (being, as we value it in present money, 30l.); 20 acres of summer fallow corn, with barley and wheat, 40l.
- 1645.—4 a. 3 r. of waire corn, sown, 3l. 6s. 8d.; 4 acres of wheat and rye, sown, 6l. 13s. 4d.; 1 acre of barley, sown, 2l.
- 1646.—2 dooles of meadow, 1s.; a close of hey and eddidge, 5l.
- 1647.—A close in Carleton called Sand-with, 13l.; 1½ acre of meadow in the

- marsh,* 17l; 3 roods in the Intacks and the rood at end, 10l.; 2 roods in the easte well, 3l. 10s.
- 1661.—50 acres of meadow, 20l.; 60 acres of meadow, 30l.
- 1665.—9 acres of barley, 18l.; 2 acres of pease, 2l.; 4½ acres of Mashelone, 6l. 15s.; 6 acres of wheat, 16l.; 6 acres of oats, 12l.
- 1666.—A year's rent of an acre of land which was sown with wheat, 12s.; an acre of wheat with consideration the rent and assessments is to be paid, 1l. 6s. 8d.
- 1668.—*Corn growing*, 7 acres of corn, 9l.; 2 acres of hemp, 6l.; *corn in the mow*, 10 acres of barley, 20l.; 19 acres of beans, 28l. 10s.; 3 acres of rye, 7l.; 4 acres of wheat, 8l.
- 1678.—3 roods of lentils, 3 roods of barley, 2l. 5s.; 2 acres of rapes, 10l.; 2 lands of lentils, 1l. 3s. 4d.
- 1679.—4 acres of rape, sown, 4l.; 8 acre of rapes, 6l. 12s.; 2½ acres of barley, sown, and 2 acres of lintels, 4l. 10s.
- 1680.—5 acres of line, 7l.; 12 acres of line, 24l.; 16 acres of meadow, 8l.; 25 acres of pasture, 8l. 6s. 8d.
- 1682.—5 acres of meadow in Gowdall Ings, 5l.; 9 acres of hard ground meadow, 1l. 15s.; 4 weeks' keeping of a steer, 2s.; grazing of 4 beasts afore May Day, 13s.; 3 a. 3 r. swaith meadow, 1l. 3s.
- 1683.—1 acre of line and a rood of tow, 3l.; rent of 32 acres of corn ground and line, 16l. 15s.; for an acre of land, 7s. 6d.; 1 acre of hemp, growing, 2l. 10s.; 3 acres of flax, 6l.; 1 acre of meadow in Snaith Ings, 10s.
- 1686.—3 acres of rapes, 12l.; 9 acres of line, 8l.
- 1688.—5 acres of line, 20l.; 3 acres of beans, 4l.; 9 acres of barley, 12l.
- 1694.—rent for an acre of corn, 12s.; rent for 4 acres of meadow, 1l. 8s.; 7 acres of pease and 3 acres of fitches, 3l.; 9 acres of oats, 12l.; 6 acres of beans, 8l.; 15 acres of hay, 11l.
- 1698.—13 acres of line ground and 7 metts of line seed sown on 6½ acres of this ground, 30l. 5s.
- 1700.—18 acres of line, 30l.; 6 doole of meadow in Heck Ings, and 3 new field lands, 2l. 10s.; 3 acres of barley stubble for line, 4l. 10s.
- 1703.—3 acres of seed line, 9l.; 1 rood of hemp, 13s. 4d.
- 1709.—5 acres of meadow in Hensall Ings, 3l. 6s. 8d.; 1½ acre of meadow, in Egborough Ings, 1l. 10s. 2d.
- 1710.—5 acres of oats and 2 acres of rapes, sown, 5l.
- 1712.—5 acres of oats, 5l.; 11 acres of beans, 14l.; 7 acres of barley, 10l. 10s.; 2 acres of barley stubble, 2l. 10s.; 4½ acres of wheat and rye, 7l. 15s.
- 1716.—30 acres of rapes, 60l.
- 1721.—5 a. 2 r. line ground and seed, 14l.
- 1722.—5 acres of line, 14l.
- 1728.—4 acres of hard corn sown at Bolton Percy in County of City of York, 6l.
- 1734.—2 acres of wheat, 4l.; 6 acres of wheat and 5 acres of barley in Womersley field, 22l.
- 1737.—A garr of oats, 8s.; 10 acres of beans, 10l. 10s.; 1 acre of line, 1l. 10s.; 26 acres of oats, 26l.
- 1738.—2½ acres of beans and lentils,

* This was low land lying between Carleton and the River Aire, of the same character, but not so celebrated, as that between Snaith and the said river, which was inclosed in 1754. I say celebrated, because it has been the subject of song: a pastoral mentioning the Inclosure may be found in "Halliwell's Yorkshire Anthology," pp. 117—120. I find an acre of meadow in Coatmarsh and a tenement in Coats bequeathed in 1637, and the following order, made at the Great Court Baron, of August, 1636. "A paine laid; That the said ferryman of Carleton ferry take but a penny at a time of the Inhabitants of Snayth, Cowick, Goldall, and Pollington, or of anie other that are custumed at the said Ferry for carrying of one horse and a man over the water of Aire, and Snaythe marshe when it is overflowed. And a halpenny for a foote man when the said marshe is overflowed, and as hath beene heretofore accustomed; in default 10s."

- 2*l.* 10*s.*; 16 acres of meadow and a rood of potatoes, 3*l.* 10*s.*
 1739.—2 acres of clover, 3*l.*
 1747.—4 acres of barley and potatoes, 6*l.*
 1756.—6 acres of clover, sown down, 5*l.* 5*s.*; 9 acres of turnips, fallow, 11*l.* 5*s.*
 1758.—9 acres of clover, 9*l.*; natural hay, 7*l.*
 1759.—7 acres of turnip land, 8*l.* 15*s.*; 3½ acres of turnip and 4 acres of clover, 10*l.*
 1760.—Reeds for barley, 7*l.* 5*s.*; 5 acres of wheat in barn, 10*l.*
- 1766.—1 a. 1 r. potatoes, 1*l.*
 1767.—11 acres of barley, 17*l.*; 11 acres of hard corn, 17*l.*; 15 acres of beans and clover, 18*l.*
 1768.—1 acre of clover, 1*l.* 10*s.*; 1½ acre of turnips, 15*s.*
 1772.—6½ acres of clover, 9*l.* 15*s.*; 9½ acres of barley, 28*l.* 10*s.*; 11½ acres of wheat, 31*l.* 12*s.* 6*d.*; 12 acres of ware corn, 21*l.*; the crop of 9 acres after all expenses deducted, consisting of wheat, oats, and barley, 16*l.* 9*s.*
 1784.—3 acres of clover, 3*l.* 10*s.*; 4 acres of hard corn, 10*l.*

Before Inclosures were general, farms were very much scattered, and much time lost in consequence. Everything which brings before us the superiority of the present system is valuable, not only as ministering to our pride, but as teaching us the lessons of contentment, and thankfulness. I print (from a Survey made between the years 1564—1572) a statement of what I conceive to be one farm, occupied by one tenant; those who know the localities will best appreciate the improved state of things.

"In Gowdall Henry Freere holdeth at will a messuage withe two laithes, an orehouse, a garthe, 9 acres of lande in the Towne feilde, 4½ acres in the same feilde, 4 acres and 3 roods in the Broche, 12 Newfield landes contayninge 9 acres, 12 buttes in the Buttefield, 3 halfe acres a roode and one acre in the same feilde, 2 landes in the Nine landes, and two halfe acres in the Burne close, 2 buttes and a roode in the Buttefeilde Bancke, a piece of meadow contayninge 40 foote breede in the said Butte feilde, 14 Intacke gates, 15 roodes of meadowe, one acre of lande in the Brigge croft, a parcell of land called the Strakes, and a close called Cowicke Shawe, 21 roodes of land in Pollington feild, and 2½ acres in the same feildes, and rente by yeare, 3*l.*"

(8.) FALLOWS.

I have preferred to give the prices of Fallows separate, that a comparison may be made between the various modes of preparing the ground and the respective value of summer or winter fallow, with the same sown with seed or with the standing crop. The word "arder" is equivalent to the word ploughing; land which had been ploughed, and how many times is frequently specified, represented so much sunk capital, for which entrance was to be paid.

- 1570.—3 acres of faugh, 1*l.*
 1578.—Manure and arders of land, 15*s.*
 1582.—12 acres of summer faugh, 6*l.*; all the arders of the lands, 1*l.* 3*s.*
 1583.—Barley arders, 7 acres, 1*l.* 3*s.* 4*d.*; bean arders, 10 acres, 1*l.*
- 1584.—4 acres of Summer Faugh, 2*l.*; 2 arders of 4 acres of land, 3*s.* 4*d.*
 1585.—5½ acres of S. F., unsown, 2*l.*; ½ acre of S. F., 6*s.* 8*d.*
 1586.—4 acres of F. with manure in it, 1*l.* 6*s.* 8*d.*; ½ acre of S. F., to be sown,

* It may be interesting to some persons to know the exact acreage of different kinds of grain, grown in Snaith and Cowick, and the five West towns, Baln, Pollington, Heck, Hensall, and Gowdall, in one year, which a paper written about 1785 supplies—it was, wheat, 1576; oats, 1423; barley, 783; turnips, 542; beans, 517; rye, 440; potatoes, 382; peas, 2.

- 8s.; for ploughing $\frac{1}{2}$ acre of land twice, 4s.; ardoure of the ground, 3l. 6s. 8d.
- 1588.—1 acre of barley land plowing once, 1s. 3d.*
- 1591.—Ardoures on the ground and mayner in the garth, 20l.; June, 15 acres of S. F., 5l.; July, 12 acres of S. F., 3l.; December, 11 acres of S. F. 7l.
- 1598.—The arders of $1\frac{1}{2}$ acre of S. F., 5s.
- 1600.—All the arders of winter fallow land, 8s.; all the arders of S. F. land, 13s. 4d.
- 1603.—Arders of $18\frac{1}{2}$ acres of land, 1l. 7s.; July, 20 acres of S. F. and 3 arders, 3l.
- 1604.—May.—23 acres of faugh ploughing, 1l.; 3 acres of fallow ground, 3s. 4d.
- 1605.—12 acres of S. F., 5l.; 3 acres of fallow rye, sown, 5l. 6s. 8d.; $1\frac{1}{2}$ acre of stubble rye, sown, 1l.
- 1609.—March.— $1\frac{1}{2}$ acre of S. F. land, 1l.; 5 acres of winter F., 1l. 13s. 4d.
- 1615.—2 acres of S. F., 2l.
- 1616.—Certaine spaces in the ground not reckoned with wood and coules, 4l.
- 1617.—5 roods of fallow, 3s. 4d.; for filling the fallows, 6s. 8d.
- 1624.—November.—6 acres of S. F., 1l. 10s.; the ardures in the ground, 3l. 13s. 4d.
- 1627.—4 acres of fallow to sow with barley, 2l.; 25 acres of S. F., 10l.; $17\frac{1}{2}$ acres of S. F. barley, 35l.
- 1629.—9 acres of S. F. wheat and rye, 15l.
- 1631.—For ploughing $1\frac{1}{2}$ acre of land four times, 6s.; 4 acres of S. F. and manure, 1l. 6s. 8d.
- 1647.—16 acres of S. F. with 4 ardures, 13l. 6s. 8d.
- 1648.—3 acres fitt to be sown with barley, and the seed, 4l.
- 1654.—11 acres of fallow, 4l.
- 1666.—22 acres of fallow ground 20l.
- 1678.—12 acres of S. F. 14l. 10s.; 11 acres of fallow for twice plowing, 1l. 14s. 6d.
- 1679.—13 acres of S. F. four times ploughed, 4l. 6s. 8d.
- 1681.—20 acres of F. four times plowed, 6l. 13s. 4d.; plowing and sowing 30 acres beans and oats at 8s. 4d. per acre, 5l.
- 1682.—1 acre of S. F. manured, 1 acre of S. F. unmanured, 2l. 6s. 6d.; 9 acres of S. F., 10l.
- 1683.—3 a. 3 r. of S. F. three times ploughing, 15s.; 4 acres of fallow for manuring and five times plowing, and the hemp green, 3l. 13s. 4d.
- 1686.— $3\frac{1}{2}$ acres of S. F. and manure, 4l. 5s.
- 1692.—16 acres of S. F., plowing and manure and the rent, 18l.
- 1694.—15 acres of F. with manure, seed sown, and tillage, 28l. 5s.
- 1698.— $4\frac{1}{2}$ acres of F. manured, 7l. 10s.; 5 acres of F. unmanured, 5l. 5s.; 3 a. 3 r. barley stubble to be sown with line seed —l.
- 1700.— $2\frac{1}{2}$ acres of F. tilling and 10 load of manure lying on the ground, 17s. 9d.
- 1704.—3 acres of F. tilling and manure, 1l. 7s.
- 1713.—8 acres of F. manure and labour, 7l. 10s.; 20 acres of F. and sowing down with wheat, 14l. 3s. 4d.; $2\frac{1}{2}$ acres of F. unmanured, 2l. 10s.
- 1715.—For seed and tilling of 3 roods of land, 12s. 2d.
- 1716.—27 acres of corn ploughing and sowing, 4l. 10s.
- 1720.—Ploughing and sowing 9 acres, 1l. 16s.
- 1730.—6 acres of manured F. and 4 acres of F. not manured, 20l.; 1 acre of rye seed and plowing, 10s. 6d.; 22 acres of beans, seed and labour, 11l. 10s. 11d.; 10 acres of oats, $2\frac{1}{2}$ acres of barley, Winter F., sowing down, 4l. 13s. 6d.; 39 acres of S. F. plowing and sowing down with barley and beans, 49l. 5s. 9d.
- 1737.—4 acres of S. F. manured, 2l. 10s.; 4 acres of barley, seed, and ploughing, 2l. 15s.
- 1742.—4 acres of F., 9l.

* The Inventory of John Ricard of Cowick, 1589, shows what small sums farm servants received at this time:—"Robert Perrit for his quarter's wages, 5s. 5d.; Francis Scott ditto, 2s. 6d.; Ann Litster, 2s.; Ann Lawe, 1s. 6d."

1756.—10 acres of wheat, seed and ploughing, 8 <i>l.</i> ; 5 acres of oats, seed and ploughing, 2 <i>l.</i> 10 <i>s.</i>	1767.—6 acres of F. making, 6 <i>l.</i> 6 <i>s.</i> ; 6 acres of turnips, F., 6 <i>l.</i>
1760.—Turnip fallow, 12 <i>l.</i> 10 <i>s.</i>	1769.—4 acres of F., 3 <i>l.</i> ; 4 acres of F., 7 <i>l.</i> 4 <i>s.</i>

The most remarkable feature of the district was the Turbary or Moor-land; a good deal of which has been converted into valuable arable land, by the system of warping pursued there, with which the name of Creyke is for ever connected. "Hatfield turf moor and Thorne waste were once more extensive than at present, having supplied for many years a great part of Yorkshire with much of its fuel." ("South Yorkshire," vol. i., p. 154.) The same may be said of Rawcliffe, Whitgift,* Goole,† Hook, Armin, and Cowick moors; of which last, under the name of Ingle-moors,‡ there are many notices in the Snaith Court-Rolls. There are still above 500 acres of peat moor in the parish of Whitgift, and as many in the township of Goole. Rawcliffe moors§ anciently consisted of the same, entering to within one quarter of a mile of Hatfield Chace. The turf was piled up on the spot whence it was cut, and when dry was placed on long narrow boats (which figure in many Inventories), so constructed as to glide along the deep natural drains and artificial channels, some with and some without a name, which eventually ended in the Aire, Ouse, or Trent. Turnbridge was the great receptacle for their cargoes. There was

* William Wiles of Whitgift (Apr. 4, 1607), gives his sister "half a stand of tow land in the Near Lotte and three dayes work of More in Whittgifte Mores duringe her life." Half a more is valued in 1618 at 1*l.* 8*d.*, and in 1678 is said to consist of three roods.

† 1602.—July 6.—Thomas Coltherd of Goole presented for loading a bote of turves upon All Saints' Day, being a Saboth day, confessed "that in the night tyme before that daie he did lode a bote with turves, but not in the daie tyme, at least after the sunne was up."

‡ The Abbot and Convent had leave to accept 1,300 acres in Inklesmore belonging to the manors of Rouclyfe and Estofte by Letters Patent, 16 Ed. III, 1342.

They are called "Englishe mores," Apr. 18, 1595.

1389.—Cur de Snaith.—John Bell came and took a moore in Inklesmoore, late in the tenure of John Scott. Court Roll.

1553.—Jan. 30.—John Motherby surrenders half a rood of more "in Ynglishmore," Stephen Tubley, gent., North, and Robert Hassard South, to the use of Robert Hassard. Court Roll.

1636-7.—March 13.—William Motherby of Snaith gives his son Wm. by will four and a half acres of more at Ingle more in the Graveship of Dounthropp.

1681, Aug. 11.—Ralph Scott and Susanna his wife surrender half an acre of of Turbary or Moore grasse in the English moores, abutting on Moorehead dyke abutting on Dykesmarsh peat, and as farr as the moores extend East. Court Roll.

§ "The King's Moor ends in breadth about 16 acres, and about 200 acres in ye whole, beginning at Moorhead Dike and extending eastward to the Turbary, and were first enclosed by Mr. Belton and Mr. Burgon about ye year * * and a house built thereon and inhabited by Mr. Gaythorne, which house was set on fire and ye fences thrown down by the inhabitants of the three towns. The Moor Ends when ye turves are dug and carryed away, are eat in comon by the three townes. The great wast was insured to ye townes in a suit against the Earl of Feversham Ao. 1685. Sir Cornelius Vermuyden and his partners enclosed part of Dykesmarsh, ye remaining 1,600 acres insured to ye inhabitants. Ao. 1629. * . The furrows so visible in Dykesmarsh and ye Moor Ends were made by a plow for drainage before Sir C. V. improvement. Earl Feversham's Suit so proved." From a MS. account of the Manors of Snaith and Rawcliffe previous to the Inclosure of 1754.

Robert Mangall of Rowcliff in his Will, proved Oct. 21, 1606, says, "I will that my daughter An Barker, wydow, have every yere, for the space of six yeres, forty loads of black turves beginninge at Mychaellmass which shall be in the yere of our Lord God 1606, at the stack hill of Rowcliff at St. Mychaell's day, for her chyld's porcions.

a square dock or basin, supplied by the waters of the Dike,* or northern portion of the Don, which was made navigable by a special Act of Parliament in 1442, and larger vessels came up the Aire to this point. The eastern side of this was in the township of Rawcliffe, the western in that of Cowick, the two places which naturally carried on most of the trade in turf; and the boundary still runs down the middle of that deep pond, paved with stone and flanked by a few wooden piles, which is the sole remnant of that once busy harbour. The price of a load "at shore," as this emporium was called, seems to have varied from one to two shillings the load.

- 1571.—*Rawcliffe*.—A syde of turves, 2s. 8d.; 9 load of red turves, 4s. 6d.
 1582.—A bowke of turves, 1l. 6s. 8d.
 1583.—42 load of black turves, 1l. 10s.
 1585.—14 load of red turves, 10s.; 160 load of turves in the more and at home, 12l.
 1599.—10 loads black turf, 13s. 4d.; 20 loads black turf, 1l.; 6 load black turf, 3s.; 7 load red turf, 7s.
 1600.—*Cowick*.—27 loads of black turves at the bridge, 1l. 7s.
 1602.—*Armsin*.—32 load of peates sold for 1l. 6s. 8d.
 1605.—A load of turves, 2s.
 1612.—3 score load of black turf, 4l.
 1622.—2 sydes of black turf, 6s. 8d., twodays' work of graveing black turf, 3s.
 1625.—6 score load black turf, 6l.
 1627.—*Goole*.—One elding stack of turf, 2l., 14 read sides, 5 cavern sides, 4 sides of furlange turves, and certaine black turves, 7l.
 1631.—For leading 22 load of turf, 6s. 8d.
 1632.—*Cowick*.—12 loads at shore, 1l. 8s.
 1637.—*Cowick*.—4 score load at the river side, 8l.

- 1644.—50 load of turves, 2l. 10s.
 1649.—32 load of black turves, 2l. 10s.
 1653.—*Cowick*.—80 load at the Dike-side, 8l. 10s.
 1661.—*Cowick*.—4 loads, 4s., 8 loads at shore and 30 loads on the moors, 3l.
 1664.—Two days' work of peate graved, 8s.
 1666.—*Rawcliff*.—15 loads at the shore, 1l. 15s.
 1667.—9 loads of peats and 9 load of Sods, 16s.
 1679.—*Rawcliff*.—27 days' work of peates in Mr. Boynton Moore, 4l.
 1685.—15 load of half part turves and 8 loads at the New Bridge, 2l. 6s.
 1687.—9 load of peats, 5 load of sods with the revershiner on the moore, 16s.
 1700.—*Cowick*.—444 cartloads, 38l. 7s., 200 cart loads at Gool, 17l. 8s.; *Rawcliff*, 17 load of black turves, 1l. 10s. 6d.
 1702.—40 load, 3l.
 1723.—38s. load, 3l. 10s.
 1725.—8 load, 1l.
 1754.—A load of turf, 2s. 6d.

* The passage of Turnbridge formed part of the perquisites of the Court of Snath. At the Court, 1537, the town of Rawcliffe is ordered to repair the East end of Thournebridge sufficiently for footmen, horsemen, and waggons.

1380, Apr. 28.—Wm. Dring Milner is charged with stealing "a sail and rudder (*linthamen et seocara*) from a barge standing in the water of Dike at Turnbrydge in the town of Cowick."

1382.—John de Wortelay slays Robert Fisher of the Dike, and is himself soon after slain at Snath by John Fisher, son of the murdered man, who gives bail for his appearance at the Gaol at York. Court Rolls.

For the history of this northern arm of the River Don, the course of which may yet be traced, especially in a field opposite Burdin House, and which is still used as a sluice to carry off water from the New or Dutch river in the time of flood, See Mr. Hunter's (South Yorkshire, pages 150—197,) chapter on the Level of Hatfield Chase.—One of the most delightful in his masterly volumes; and quite a model for future writers of the way in which curious points of biography, rare anecdotes of literary interest, and facts of historical importance, may be woven into works professedly on topography; and may be so strictly in point as to be no incumbrance; adding to their value, without diminishing their elegance and brevity. To omit this sincere tribute of admiration would be unbecoming in one who is under numerous obligations to Mr. Hunter's private correspondence and friendship, as well as to the pages of "South Yorkshire."

(9.) WOOD, TIMBER, and COALS.

- 1580.—8 boards, 1s. 4d.
 1583.—200 kyddes,* 2s. 8d.
 1584.—A load of kiddes, 2s.; 500 billet wood, 6s. 8d.; 500 stowres and pannels, 12s.; 100 stowres, 2s. 8d.; 20 loads of kiddes, 1l.; 2 aleeds, 2s.; 4 crafes or crackells, 1s. 4d.; fellows, speakes, styes, sawne bords, and tymber, 1l. 6s. 8d.; wood in the padaxe, 3s. 4d.; all skelbouses, horse planchers, and pales, 10s.
 1585.—50 bunches of lath, 2 gang of speakes, and other plough geare, 1l. 10s.
 1586.—6 twelve-foot bordes, 6s.; 6 score and 15 spares, 2l.
 1587.—Sawed stowthes and wood about the house, with sparres in rate, 10s.
 1588.—12 swalles of wood, 1s. 8d.; 32 clifts of wood, 5s. 4d.; 9 pieces of timber, 4s. 6d.; 31 pieces of sawne wood, 6s. 8d.; 8 long railes and 10 gasts, 6s. 8d.; an ashtree, feld at Hecke, 4s.; clyfte woode in the fowlde, and woode in Womerslay Lordshippe, 3l.
 1589.—Old fatt timber, speiks, plowe heades, plowe stiltis, plowe beames, yocks, and other timber, 1l.
 1590.—All byllett wood, with other offall woode, 1l. 6s.; 6 loads of wood, 3s. 4d.; 2 paire of longe wayne raits, fatte timber, and 15 bunches of laths, and one bord that fellows lyes in, 1l.; fowrames and stoules, 2s.
 1591.—4 loads of fyer wood, 8s.; 22 bordes, 4s.; 65 hoodinges for bootes, 1l.; 2½ gange of felowes, 7s.; 4 gange of wheele spooks, 5s. d.; 11 wheele naves, 5s. 6d.; one carts graine and 6 pieces of tymber, 3s. 4d.; a bowlinge block, 4d.; a hayle block, 4d.
 1592.—A tree, 1s. 6d.; 2 bordes, 4d.; 22 trees in the pitt, 16s.
 1593.—600 billit woode, all to be oke woode but 100, and to be delivered at Snaythe landyng, 9s.
 1595.—5 load of kyddes and shepe barres, 13s. 4d.; 6 score palle boards, 5s.; 20 sparres, 10s.
 1596.—A spare, 1s.; 100 spares unfeld in the closes, 2l. 13s. 4d.
 1597.—17 sawne boards, 5s.
 1598.—3 tymber clogs, 7s. 6d.; 8 load of browme, 18s.
 1600.—30 hoodynge bords and 4 cart graynes, 11s.
 1601.—3 loads of wood, 7s.; 2 loads of kiddes, 5s.
 1603.—8 sawen posts, 8s.; 100 bordes, 1l. 3s. 4d.
 1605.—A sweath rake, 2 swalles of wood, and 6 old tubbs, 10s.; 2 pattets and 2 railes, 1s. 4d.
 1606.—1 Ambrie, a chaire, and a plancke, 3s.; a Flanders' chest, a little table, and a cofer, 5s.; 2 gang of ffelses, 2 gang of speakes, 12s.; 2 stees, a stand heck, malt whernes, mustard whernes, 2 loads of wood, 200 whyns with fewell and coales, 10s.
 1610.—20 sawn boards, 5s.; 4 load of coals, 1l. 6s. 8d.; 8 crayes, 5 plow beames, 2 axell trees, a rippell combe, and 2 bunches of latts, 8s.
 1611.—3 wayne rathes, 5s.; 89 sparres, 1l. 6s. 8d.
 1612.—150 stowres and other wood about the house, 8s.; an oak tree, 18s. 4d.; a tree at the Morreat-heads in Rawcliffe, 1l.; 2 hackney saddles, and 2 pack saddles with some male pillions, 13s.; 6 gange of fellowes, 1l. 10s.; 8 gange of speakes, 13s. 4d.; 20 pare of naves, 1l. 13s. 4d.; a lather and 20 sheep barres, 11s.; fotherum, hecks, skelbouses, sheepbars, and other wood, 10s.
 1614.—10 harrow bulls, 1s. 4d.; 50 stowers, 5s.; 8 hinging gates, 1l.
 1615.—A load of kids, 3s.; 3 bunch of latts, 2s.; 3 planks, 15s.; 5 bunches of latts, 3 cart raets, and a plank, 6s. 8d.; 6 pieces of wood, 1l. 10s.; 4 pieces of ashwood, 1l.; a certanef of

* From the old Dutch word "kidsen" to break.

† 1663.—April 11.—Robert Smith, alias Peares, of Carleton, gives to his wife and daughters jointly "all the underwoods, as ellers, willowes, sallowes, bessels, and such like brushwood."

- willowtrees, 1*l.*; 10 window siles, 1*l.* 5*s.*;
5 bedde stoopes and a lyttle piece of
wood, 1*s.* 8*d.*; an ox harrow and 2
horse harrows, 7*s.* 4*d.*
- 1616.—100 spars, 4*l.*; a hencall, a
barrow, and a pair of woodracks, 1*s.*;
a gousecall and 2 little washing tubbs,
2*s.* 4*d.*
- 1620.—2 load of coals and wood, 13*s.* 4*d.*
- 1622.—A bed of coals, 2*s.* 6*d.*
- 1631.—1000 billets, 1*l.*; ashe and ells
powles, 3*s.* 6*d.*; dawbynge stowres, 9*d.*;
6 load of kiddes, 5*s.*; 2 load of gorre
kiddes, 6*s.* 8*d.*
- 1637.—4 beds of coals, 12*s.*; a barne
covered, 6*l.*
- 1638.—A cart load of coals, a load of
turves, and a load of wood, 10*s.*; an
oxe cart, 13*s.* 4*d.*; a plough, a sled,
an oxe harrow, and a horse harrow,
certain felfes, 2 middle trees, a payre of
cartsidea, a cart-tree, and one nave,
10*s.*
- 1639.—20 fir deals, 1*l.*; the larder, 2*l.*;
13*s.* 4*d.*
- 1642.—A load of kiddes, 2*s.* 6*d.*
- 1644.—One espin tree in the crofte,
10*s.*
- 1648.—6 load of wood and certain coles,
3*l.* 6*s.* 8*d.*
- 1650.—10 load of roots, 2 load of kidds,
2 stand hecks, 2 lathers, with other
wood and coals, 3*l.* 6*s.* 8*d.*
- 1658.—A goose-call, 4*s.*; 4 load of
coals, 1*l.*
- 1661.—2 waineload of coals, 16*s.*
- 1663.—20 fir deales, 10*s.*
- 1664.—4 load of coals and a grinde-
stone, 1*l.* 6*s.* 8*d.*; a strike of New-
castle coals and 2 load of turves, 2*s.*
- 1667.—Certain eldine, 1*s.* 6*d.*, 3 dozen
bar-whanes, 6*s.*; 6 firdeales, 4*s.* 6*d.*;
3 loads of coals, a stand heck, and
wood, 1*l.* 10*s.*
- 1679.—A load of coals and fuel, 12*s.*;
30 boards, a firdeal, 1*l.* 2*s.*; a pr. of
cart sydes, 3*s.*; 4 firre powles, 4 gang
of cart staves, and 6 cart rungs,
4*s.* 6*d.*; 2 naffes, 20 felkes, 12 speakes,
and 2 thick boards, 15*s.*
- 1680.—10 long boards, 8*s.* 4*d.*
- 1681.—4 score and 16 boards, at 6*d.*;
a peice, 2*l.* 8*s.*
- 1682.—100 pale boards, 12*s.*; 2 horse
brigs with gates, 13*s.* 4*d.*; 2 load of
coals, 18*s.*; 7 dozen ash garthes, 7*s.*;
a sack of charcoal, 1*s.* 8*d.*
- 1683.—6 sacks of coals and half a load of
sods, 5*s.*
- 1692.—14 deals and 3 boards, 11*s.*
- 1693.—9 sacks of coals with sods and
turves, 10*s.*
- 1695.—13 bunch of green willowes and
2 bunch of white, 8*s.* 8*d.*
- 1699.—10 firdeales, 6 oak deals, 17*s.* 6*d.*
- 1700.—2 load of fir wood, 3*s.*
- 1704.—30 waggon axletrees, 1*l.* 5*s.*; 33
planks 7 foot long, 1*l.* 13*s.*; 13 gange
of waine spokes, 2*l.* 5*s.* 6*d.*
- 1707.—A dozen coals, 8*s.*
- 1719.—5 dozen coals and a load of turf,
2*l.* 10*s.*
- 1720.—20 qrs. of chopt bark sold for 8*l.*
- 1724.—3 dozen coals, 2*l.* 5*s.*
- 1726.—2 doz. coals, 1*l.*
- 1737.—3 doz. coals, 1*l.* 10*s.*
- 1744.—23 deals, 1*l.* 5*s.*
- 1758.—30 fir poles, 15*s.*; 10 pair of
fir sparres, 6*s.*
- 1772.—11 bunches of reads, 1*s.*
- 1766.—2 stand hecks and a tommerill, 5*s.*

1382, April 28.—In parco de Fippyn prostrate fuerunt tempore yemali hujus
anni ix quercus ad edificia novæ domus infra manerium, i. quercus pro emendatione
del "helme" in eodem parco, i. quercus pro una scala * * ad staurum manerii,
i. quercus pro "stakes" faciendis ad haïam per de novo faciendam tempore predicto,
i. quercus pro uno Saylewane ad molendinum vent: ibidem: Unde Croppi de xiii.
quercubus prædictis comburiverunt pro gipso, Anglice "plastre" pro [p. oet] et
fundi novæ domus platorandi, et croppi unius quercus venditæ Simoni de Alkbarowe
Monacho ibidem pro 5*s.* quo pretio est levandum de eodem Simone; et cortis dicto-
rum xiv. quercuum nichil, quia extra seisonam cortie. Snath Court Roll.

III.—PROVISIONS.—*Butter and Cheese; Bacon and Beef; Bees and Honey.*

(1.) BUTTER and CHEESE.

- 1570.—3 pots of salt butter and 16 cheeses, 10s.
 1576.—A stone of butter, 2s. 8d.
 1580.—A leaden limbeck and $\frac{1}{2}$ stone of butter, 3s.; 65 cheeses, 2 kits of butter, a $\frac{1}{2}$ kit, a pot of salt salmon, 3 pecks of haver meal, a cake of tallow, 2 cheese hecks, &c., 3l. 10s.
 1583.—In salt salmon, salt butter, and 2 pots, 6s. 8d.; 6 cheeses, 3 bushels of hemp seed, $1\frac{1}{2}$ stone of butter, and a kymnild in the chamber with beef in it, 1l. 6s. 8d.
 1585.—75 cheeses, 1l. 10s.
 1587.—A pot of salt butter, 1s. 4d.
 1588.—A pot of salt butter, 8s.; 63 cheeses, 1l. 10s.; 15 stone of salt butter, and 2 sallmons, 2l. 5s.
 1591.—4 pots of salt butter, 16s.; a cheese heck and 20 cheeses, 13s. 4d.
 1592.—24 cheeses, 6s.
 1605.—20 cheeses, 14s.
 1614.—60 cheeses, great and small, 3l. 10s.
 1636.—12 cakes of butter, with pots, 7s.
 1637.—3 rye loaves and 5 cheeses, 2s.
 1638.—18 cheeses and 14 stone of butter 4l. 10s.; 8 lbs. of butter and one shelf, 3s. 4d.; 13 cakes of butter, 7s.
 1639.—12 small cheeses, 2s.; 3 cheeses, 2s.
 1646.—5 cheeses, 5s.
 1653.—20 cheeses, 10s.
 1663.—3 rye loaves and 10 cheeses, 10s.
 1696.—60 cheeses, 6l. 5s.
 1721.—A firkin of butter, 14s.
 1724.—27 cheeses, 17s.

Butter per stone:—

- | | | |
|-----------------------------|------------------------------|------------------------------|
| 1576.—2s. 8d. | 1603.—3s. 6d. | 1628.—Salt, 3s. 6d. |
| 1578.—2s. 6d. | 1610.—3s. 6d. | 1630.—3s. 6d. |
| 1582.—2s. | 1611.—5s. 3d. | 1636.—3s.—4s. 8d. |
| 1583.—3s. 8d. | 1612.—4s. 8d., salt, 3s. 6d. | 1639.—3s. 4d. |
| 1585.—Salt, 2s. 6d.—2s. 8d. | 1613.—Salt, 4s. | 1647.—5s. 10d. |
| 1589.—Salt, 2s. 4d. | 1614.—5s. | 1658.—4s. 8d. |
| 1597.—2s. 1d. | 1616.—3s. 4d.—4s. 8d. | 1665.—4s. 8d. |
| 1598.—4s. | 1617.—3s. | 1685.—4s. 8d. |
| 1601.—Salt, 3s. 4d. | 1623.—3s. 3d. | 1696.—4s. 4 $\frac{1}{2}$ d. |
| 1602.—4s. | 1626.—3s. 4d. | |

(2.) BACON and BEEF.

Salt Beef seems to have once been as plentiful as mutton hams, in the days of our forefathers; no doubt it was suspended in the chimney corner, that it might imbibe the "reek" of the wood fire. [It was in high favour, or would never have been produced at an Assize breakfast, at which a Judge, who was famed for his severity, remarking, "I'll try that beef," one of the company replied, "If you do, my Lord, it will be *kung* beef."]

- 1578.—A beef flick, a bacon flick, 20 yards of sacking, and a quart sawe 10s.
 1580.—6 bacon flicks, 16s.
 1581.—5 bacon flicks, 3 beef flicks, a grease cake, 16s.; 8 bacon flicks, 1l. 4s.
 1583.—A bacon flick, 2s.; 2 bacon flicks, 6s. 8d.
 1585.—3 bacon flicks 15s.
 1588.—2 swine at balkes, 5 kitts, 6 bowles, 6s. 8d.
 1589.—4 swine hanging at the balkes, 1l. 2s.
 1590.—A little swine in the fatt, 3s.; 6 beef flicks; 6 bacon flicks, tallow, and grease, 2l. 13s. 4d.
 1592.—2 beef flicks, 9s.
 1612.—2 bacon flicks, 5s.; 2 bacon flicks, 10s.
 1620.—5 bacon flicks, 2l.
 1639.—A bacon flick, 6s. 8d.
 1652.—6 beef flicks, 1l.
 1682.—2 hous (sic.) of beef, 2s. 6d.; 4 bacon flicks, 6 beef flicks, 2l. 10s.
 1728.—2 bacon flicks, 1l. 7s. 6d.
 1749.—5 beef flicks, 12s.

(3.) BEES and HONEY.

- 1572.—A hive of bees 1s.
 1578.—An old stock, 3s.
 1582.—3 stocks of bees, 10s.
 1584.—4 swarms of bees, 13s. 4d.
 1588.—7 pints of honey, 4s. 4d.
 1592.—2 quarts of honey, 10d.
 1593.—A gallon of honey, 3s. 4d.; 5 stocks of beyes, 1l. 1s.
 1600.—4 beestocks, 1l.; 1½ gallon of honey, 8s.
 1602.—5 beehives, 12s.
 1604.—A hive of bees, 5s.
 1613.—3 stocks of bees, 1l.; 2 swarms of bees, 6s. 8d.
 1625.—3 pints of honey, 1s. 4d.
 1638.—2 stocks of bees, 1l. 10s.
 1647.—2 stocks of bees, 1l.
 1656.—3 pints of honey, 2s. 6d.
 1658.—5 stockes of bees and 2 swarms, 3l. 10s.
 1663.—3½ pints of honey, 3s. 6d.
 1664.—2 skeppes of bees, 1l.
 1698.—5 stocks of bees, 2l.
 1703.—A stock and swarm, 13s. 4d.
 1719.—A swarm, 2s.
 1747.—A swarm, 8s.
 1749.—3 swarms, 1l.; 4 hives, 1l. 10s.
 1760.—3 hives, 1l. 1s.

IV.—ANIMALS.—*Horses; Cows; Oxen; Sheep; Pigs; Goats; Poultry.*

(1.) HORSES, MARES, FOALS, FILLIES, STAGGES, GALLOWAYS, COLTS.

- 1568.—12 horses and mares, 14l.; 6 horses, 5l. 6s. 8d.
 1569.—6 horses, 2 fillies, and 2 stags, 12l. 17s.
 1570.—2 mares and a horse, 3l.; a mare, 6s.
 1571.—3 mares and 2 foals, 2l. 13s. 4d.; a white horse, 1l. 6s. 8d.; a mare, a foal, and a stag, 2l. 3s. 4d.; a colt, 4 years old, 1l. 10s.
 1572.—4 horses, 5l.; 3 horses, 2 mares, a filly, and 2 foals, 5l. 6s. 8d.
 1575.—A grysseld nag, a saddle, bridle, and pair of spurs, 12l.; a horse and a mare, 3l.
 1577.—2 mares, 2 colts, and a filly, 5l.; an old horse, 2s.; 2 mares, a foal, and 2 nags, 5l. 6s. 8d.; a mare, 1l.; a white horse, 1l. 13s. 4d.; 2 mares and a foal, 4l.
 1578.—3 mares and a horse, 9l.; 2 colts and 2 fillies, 5l.; 2 mares, 2 nags, and a stag, 6l.; a mare, 1l. 6s. 8d.; a mare, 5s.; 7 horses and mares, 10l.
 1579.—A mare and saddle, 13s. 4d.
 1580.—A grey mare, 1l. 10s.; a white mare and a gray foal, 1l. 13s. 4d.; a black mare, 1l. 16s. 8d.; a red mare and filly, 3l. 6s. 8d.
 1582.—2 colts, a year old, 1l. 6s. 8d.; 2 nags and 2 mares, 5l. 6s. 8d.; one ambling gray mare, 2l.; a dun gray mare, 1l. 13s.; a black bay mare, 1l. 6s. 8d.; 10 mares and a stoned horse, 18l. 6s. 8d.; 7 fillies and colts, 6l. 13s. 4d.
 1582.—May 8.—*Cowick*.—A bay mare and her foal, 2l.; an iron-gray mare, 1l. 13s. 4d.; a bay colt with a mealy mouth, 1l.; a black colt, 1l. 13s. 4d.
 1583.—A mare and foal, 2l. 6s. 8d.; a bay mare and foal, and a follower, 2l. 6s. 8d.; a white nag, 2l.; a bay mare, 1l. 10s.; a bay stag, 1l. 10s.; a gray stag, 1l.
 1584.—A brown "curtall" horse, 1l. 3s. 4d.; a gray mare and her foal, 1l. 3s. 4d.
 1586.—2 draught horses and 2 draught mares, 6l.; a filly, 13s. 4d.; a little mare, 1l.
 1587.—A gray mare and foal, 1l. 13s. 4d.; a bay mare and a colt foal, 1l. 10s.; a four-year-old gray filly, 1l. 10s.; a bay colt, 2l.; a gray draught horse, 1l. 6s. 8d.; a gray stoned nag, a gris-seld nag, a bay mare and a follower of a year old, a gray filly called "Byrd," and a bay nag, 10l.
 1589.—2 riding nags and a foal, 6l.; 4 fillies and a stoned colt, 7l. 13s. 4d.; 4 mares and a stoned horse, 10l.; a

- bald horse, 2*l*. 13*s*. 4*d*.; a pyde filly, a colt foal, a stoned horse, and a bay mare, 3*l*. 13*s*. 4*d*.; 12 draught horses and mares, 20*l*.
- 1593.—4 mares, 4*l*. 10*l*.; a sad bay colt, 3 years old, 1*l*.; a bay brown colt, 2 years old, 13*s*. 4*d*.; a two-year-old gray filly, 6*s*. 8*d*.
- 1596.—A three-year-old filly, 2*l*.; a gray mare, 3*l*.; a mare, 2*l*.
- 1598.—A mare and 2 colts, 18*l*.; 3 mares, a nag, and 2 young ones, 13*l*. 6*s*. 8*d*.; a mare, 3*l*.; a filly, 3*l*.; 3 horses, 2*l*. 2 colts, 10*l*.; a great black mare, 2*l*. 10*s*.; 3 other mares, 6*l*.
- 1602.—A bay mare, hipt, 13*s*. 4*d*.; 2 nags, 2*l*. 6*s*. 8*d*.; a lame nag, 6*s*. 8*d*.; a stoned horse, 7*l*.
- 1607.—A mare, 3*l*. 5*s*.; a nag and a mare, 4*l*.
- 1610.—A bay bald filly, coming 3 years old, 4*l*.; a sorreld filly, coming 2 years old, 2*l*.; 6 draught horses, 2 nags, and 2 sucking foals, 25*l*.; a filly, called "Baltrye" filly, 8*l*. 10*s*.; 3 horses and a stoned horse, 6*l*. 13*s*. 4*d*.; 6 fillies, 12*l*.; 2 colts, 5*l*.; 3 gray mares, 5*l*.; 3 lame mares without foals, 2*l*.
- 1618.—An ambling gray mare, 3*l*. 6*s*. 8*d*.
- 1627.—A gray mare, a yellow mare with her foal, and 2 fillies, 6*l*. 10*s*.; a gray mare and foal, 3*l*.; a gray mare and a filly, 4*l*.
- 1630.—A pacing bay nag and an old black mare, 3*l*. 6*s*. 8*d*.; an old blind milne mare, 1*l*. 10*s*.; a young gris-selled mare and foal, 3*l*.
- 1639.—A mare and nag, 7*l*.; 8 draught horses and 3 fillies, 33*l*.; 6 mares, 20*l*.; 4 draught mares, 20*l*.; a nag, 3*l*. 16*s*. 8*d*.; 2 mares, a filly, and 2 foals, 18*l*.
- 1643.—A gray mare and a bay nag, 10*l*.; a mare and foal, 2*l*.
- 1645.—A brown mare and her foal, 3*l*. 6*s*. 8*d*.; a gray filly, 2*l*. 6*s*. 8*d*.; a nag and a sorreld bald filly, 5*l*. 6*s*. 8*d*.
- 1650.—A mare and foal, 7*l*.: a bald filly, 4*l*. 6*s*. 8*d*.; 8 gelt horses, 9*l*. 10*s*.; 3 mares and 3 followers, 15*l*.
- 1651.—A gray nag, 4*l*. 13*s*. 4*d*.; a bay mare, 4*l*. 10*s*.; a bay filly and a foal, 6*l*. 10*s*.; a bald mare and her foal, 6*l*. 10*s*.; a grisseld mare and her follower, 8*l*.
- 1658.—A white milln horse, 2*l*. 10*l*.; 5 young horses, 7*l*.; a little foal, 16*s*.; 2 gelt horses, 3*l*. 6*s*. 8*d*.; a gray horse, 2*l*. 13*s*. 4*d*.
- 1668.—A gray mare and saddle, 5*l*. 13*s*. 4*d*.; 10 draught horses and 2 foals, 30*l*.
- 1672.—4 horses sold for 9*l*. 17*s*.; 3 horses, 6*l*.
- 1678.—3 three-year-old horses, 12*l*.; 6 two-year olds, 15*l*.; 4 foals, 7*l*.; 4 draught horses, and 4 young horses, 25*l*.; a yearling foal, 5*l*.; a two-year-old filly and a two-year-old colt, 6*l*.
- 1681.*—A bay mare called "Nutty," and her foal, 3*l*. 6*s*. 8*d*.

* The following letter, hitherto unprinted, may not be out of place. It was addressed to the founder of the family of Fawsitt, of Hunsley and Skirlington, a co-heiress of which married the Rev. Francis Best, of Elmswell and South Dalton, but died *s.p.* July 4, 1771, aged 49. The writer was Charles, 1st Lord Clifford, of Londesbrough, eldest son of Richard, Earl of Burlington, by Elizabeth, dau. and heiress of Henry, 5th Earl of Cumberland; he died in his father's lifetime, A.D. 1694, leaving issue by Jane, dau. and coheir of William Duke of Somerset, Charles, 2nd Earl of Burlington, whose granddaughter and coheir carried Londesbrough to the Dukes of Devonshire. [Penes C. B. R.]

"London, Aprill
the 2d, 1681.

"Mr. Fawoett,

"I haue occasion at this time for a pritty Nagge, of above 14 handes high, or something under if hee bee handsome, to give away; and if he trots I am indifferent whether hee rases or no. I doe apply my selfe to you in this affaire, because if there bee any horses worth anythings in the country, I am sure you know them. I know you will buy for mee with as much care as for your selfe; I would'e not excede tenne or twelve pounce, and I hope you may get a good one for yt prise. I desiring one of an indifferent sise, and a trotter, I woulde have you, if you can, to get one time enough to sende up with my father's horses, and

- 1688.—2 mares and a colt, 8*l*.; 4 mares, 3 followers, and 2 foals, 15*l*.; 9 horses, young and old, 18*l*.; 3 mares and 2 foals, 5*l*.
- 1695.—7 horses, (one with another 3*l*. 10*s*.) 24*l*. 10*s*.; 3 foals, 3*l*.; a gray mare, 4*l*.; a stoned colt, 2*l*. 10*s*.
- 1710.—3 mares and foals, 6*l*. 6*s*.; 3 mares and followers, 9*l*.; a horse and filly, 4*l*.; 8 draught horses and 3 foals, 30*l*.
- 1715.—16 draught horses, 52*l*.; 9 young horses, 20*l*. 5*s*.; a stoned horse 12*l*. 15*s*.; 5 horses, 15*l*.
- 1719.—3 foals, a year old, 4*l*. 10*s*.; 2 foals, 2 years old, 5*l*. 10*s*.
- 1720.—A gray mare, 4*l*. 10*s*.; sorrell horse, 4*l*.; great brown mare, 5*l*. 10*s*.; Hudson horse, 3*l*. 3*s*.; blind horse, 2*l*.; Middlebrook horse, 5*l*.; 2 black foals, 6*l*.; brown filly, 1*l*. 10*s*.; blind horse, 2*l*.; black filly, 5*l*.; black bald mare, 2*l*. 10*s*.; galloway, 4*l*.; black filly, 4*l*. 10*s*.; gray colt, 4*l*. 10*s*.
- 1721.—4 draught horses, 14*l*.; riding horse, 5*l*.; galloway, 4*l*.; 3 young horses, 7*l*.
- 1732.—5 young foals, 1*l*.; 2 nags and 2 mares, 18*l*.; a mare, 1*l*. 1*s*.; 3 mares, 10*l*.
- 1737.—A stoned horse, 15*l*.; a sorrell mare, a gray mare, and a black filly, 10*l*. 10*s*.; a sorrell filly and a gray colt, 4*l*. 10*s*.
- 1742.—A mare, 6*l*.; a horse, 8*l*. 10*s*.; a black mare, 4*l*.; a black filly, 3*l*.; 6 draught horses, 25*l*.; a galloway, 4*l*. 4*s*.; a young mare, 5*l*.; 4 mares and 2 geldings, 20*l*. 10*s*.
- 1748.—A black horse, 3*l*.; a black mare, 2*l*. 2*s*.; an old bald horse, 1*l*. 1*s*.; a black mare with the "Pole evill," 1*l*. 1*s*.; 3 mares, 6*l*.
- 1751.—A mare and 2 foals, 5*l*. 15*s*.; a horse and 2 mares, 4*l*. 17*s*.; a mare and foal, and a mare and a horse, 10*l*.; 2 old mares, 10*s*.; a riggald horse, 2*l*.; 2 mares and a filly, 12*l*.; a mare and foal, 4*l*.
- 1752.—A gray colt, 3*l*. 8*s*.; a black filly, 2*l*. 10*s*.; a yearling foal, 15*s*.; a black mare, 5*l*. 5*s*.; an old bay mare, 3*l*. 10*s*.; 2 three-year-old colts, 7*l*.
- 1756.—A mare, 6*l*. 11*s*.; stare mare and black mare, 5*l*. 12*s*.; 2 foals and a galloway, 8*l*.; a brown mare, 7*l*.; a brown horse, 8*l*.
- 1760.—2 foals and 2 horses, 8*l*.; 3 colts, 15*l*. 10*s*.; 3 draught horses, 15*l*.
- 1766.—A black mare, 4*l*. 4*s*.; a brown mare, 5*l*. 16*s*.; a black horse, 2*l*. 2*s*.; a gray galloway, 10*s*.; a brown colt, 2*l*. 10*s*.; an old bay mare, 2*l*. 10*s*.; a brown mare, 4*l*. 10*s*.
- 1767.—A black horse, 6*l*. 10*s*.; a black bauld horse, 1*l*.; a mare and foal, 5*l*.
- 1772.—A mare, 10*l*.; a colt, 10*l*.; a mare, 6*l*. 6*s*.; a mare, 11*l*. 11*s*.; 3 foals, 14*l*. 15*s*.; a horse, 5*l*.; 8 horses, old and young, 48*l*.; 7 draught horses, 47*l*.; 5 foals, 25*l*.; a mare and foal, 10*l*.; a black mare and foal, 12*l*.; a distempered four-year-old colt, and a distempered four-year-old filly, 3*l*. 12*s*.; a two-year-old colt, 7*l*.
- 1774.—4 draught mares, 30*l*.; 3 mares, 10*l*. 10*l*.
- 1778.—A chestnut mare, 3*l*.; a bay horse, 2*l*.; 2 mares and 2 horses, 24*l*.; a hackney mare and 2 ponies, 14*l*.; a two-year-old colt and a year old foal, 8*l*. 5*s*.
- 1783.—A mare, 1*l*. 6*s*.; a mare, 6*l*.; a young horse, 8*l*. 8*s*.

so giue charge to him yt bringes them not to ride mine, and I shall reward him if hee bringes him up well. The mony you disburse for the buying this horse shall bee paide to whome you appoint heere, or else at Lansbrough, if it bee more for yr convenience. The 4*l*lb odd mony I owed you at Yorke I paid Kitt Crosse, and hee promist mee to giue you notice of it. If you thinke the horse cannot be conveniently brought up with my Father's horses, then I woulde have you hire one a purpose, whome may alsoe bringe the Hound Bitch Will Graham promist mee. Yr care and dispatch in this businesse is desired by yr assured frende

"(Seal a wivern passant.)

"CLIFFORDE.

"For Mr. Richard Fawcett, at Lansbrough.
"To bee left with the Poste Master of Yorke."

I give a few extracts from the Court Rolls, as regards the tolls taken at the Horse Fair:—

"19 Eliz. 1577,—Richard Moyses, of Leeds, bought one bay meare with a white rache in the head, which trotteth, sold by Richard Cowper, of Belby. Toll 1d.

"20 Eliz.—Robert Dowles, of Ashelby, sold a curtall horse, colour bay, which trottith, to William Dixon, of Wentbridge. Richard Fidlinge, of Hirst, couesd a white nagge which trottith and rakith, with a gray meare. 24 Eliz.—Robert Hotwyde, of Sykehouse, sold one gray filly unto Wm. Brockhole, of Bramwith, noe earemarke, but a crosse on the nar shoulder, price xxijjs. Richard Wilson, of Norminton, solde unto John Wilflet, of Holden parishe, one fillye of three years old, color, a blacke gray, price xxs. Edmund Davy, of Belton, did sell to Robert Gathorne, of Estofte, one dune meare, with the spurrowell on the farr sholder, crompt the forre eare and slitt the narr, price xijjs."

John Simpson, by Nuncupative Will, dated Saturday, July 6, (pr Nov. 15,) 1603, gives to his son Robert 20l., "to be valued and taken of four of my best draught maires, cart and cart geare, plowe and plowe geare, and harrow and harrow geare, yokes, flailles, and other implements about the gairth, with other goodes to make the same forthe, 20l."

John Stephenson, of Fieldhouse, by will dated Jan. 8, 1625-6, gives to his son Richard a bay mare called "Berrye;" to the poor people of Goule everie house 4d.; to his son John his milne; and desires to be bur in Hooke Church, "in my own staule where I sitt."

I quote a few prices from the inventory of Sir Francis Boynton, Kt., whose steeds may easily be distinguished from the draught horses, and must also have been first rate in quality.

Barmston.—11 old mares, 2 three-year-old colts, 3 yearling colts, a young filly and a foal, 35l.; a bay stoned horse and 11 summer nags, 12l.; a bay gelding, 20l.; a browne bay gelding, 13l. 6s. 8d.; a gray gelding, 6l. 13s. 4d.; a gray mare, 5l.; a black gelding, 10l. *Thornton Bridge*.—A stoned horse, 6l.; 2 colts, 7l. 6s. 8d.—Poulson's Holderness, vol. i., p. 215.

1382.—June 30th.—Robert Forman accuses William Colthird, of Swynfleet, of having taken and sold a horse of his from Dykesmarsh, and claims 20s. damage.—Snaith Court Roll.

(2.) Cows, BEASTS, STIRKS, WHIES, BULLS, HEIFERS, and STEERS.

Ousefleet seems, as at present, to have been considered a happy situation for young beasts, and immense quantities seem to have been kept by its inhabitants.

1568.—9 yearling calves and 5 young beasts, 4l.; 4 foals, 6 oxen, and 15 kine, 28l. 3s. 4d.	kine and 2 whies, 5l. 6s. 8d.; 7 kine, 6 young beasts, and 5 calves, 10l. 8s. 1570.—3 kine, 3l. 6s. 8d.
1569.—4 kine and 2 calves, 3l. 8s.; 4	1571.—3 kine, 3l.; a why, 9s.; 7 kine

* The following petition is dated 19 Hen. VII., 1504. "Sheweth to yor honorable wastshippe Richard Naller yor poore sutor and supplyant qweras Robert Bain, ye Balyffe of Snayth, ceasyd all the guds of James Nalor of Bak Baln, and hadd theym away, 2 stotts and a qweye of the said guds was Richard Naller yor said supplyant, ye don of ye said James, the qwiche 2 stotts the said Richard boght of John Roukke of Halyfax, at Wakefelde, upon Hall Hawlowe even last paste, for 10s. 4d., and the qweye the said Richard boght of Jeffery Badwyne of Sykehous for 3s. The said Richard Naller yor supplyant besechyth yor worshypfull wastshippe desyering this grayss by the waye of charitie and for the love of Jhu, qweras he has no more gude * * yt he myght have theme restoreyd a gayn after gude ryght tyem, and the said Rychard yor supplyant may evermore praye to Gode for * * to endure." Court Roll.

- and a bull, 10*l.*; 4 calves, 1*l.* 13*s.* 4*d.*; 4 young beasts, two years old, 3*l.*
- 1572.—2 kine, 1*l.* 13*s.* 4*d.*; a why calf, 8*s.*; a bull and a why, 1*l.* 10*s.*; 3 kine, 4*l.*; 5 spanyng calves, 1*l.* 13*s.* 4*d.*
- 1573.—2 kine and a calf, 2*l.* 6*s.* 8*d.*
- 1575.—2 young calves, 16*s.*; a cow and a why, 2*l.* 13*s.* 4*d.*; 2 kine, a stott, and a why, 4*l.* 13*s.* 4*d.*
- 1576.—4 kine, a why, and 2 calves, 6*l.*
- 1577.—4 stirks, 2*l.*; 4 spangyng calves, 1*l.* 6*s.* 8*d.*; a stott and a why, 2*l.*; 6 kine, 10*l.*; 2 kine, 3*l.*; 3 kine, 4*l.*; a cow and a why, 2*l.* 13*s.* 4*d.*
- 1578.—2 dripe kine, 2*l.*; 7 three-year old whies, 2*l.* 6*s.* 8*d.*; 7 two-year old whies, 6*l.*; a grey bull, 3 little bulls, 3*l.* 6*s.* 8*d.*; 2 heifers, 1*l.*; 4 young beasts, 2*l.* 6*s.* 8*d.*; a black stirk, 10*s.*; 3 yearings, 1*l.*; 2 whies, 2*l.*; 9 kine, 9*l.*; 7 kine, 8*l.* 6*s.* 8*d.*; 2 kine and 2 whies, 6*l.*
- 1579.—2 kine and 2 calves, 2*l.* 12*s.*
- 1580.—A cow 1*l.*; a why, a stirk, and a "winter," 1*l.* 1*s.*; 5 geld cattle, 3*l.*; 4 kine, 5*l.* 6*s.* 8*d.*; a cow, 1*l.* 13*s.* 4*d.*
- 1582.—13 calves of this year, 4*l.*; a bull stirk, 13*s.* 4*d.*
- 1583.—9 kine, 12*l.*; a why stirk, 17*s.*; 2 calves, 10*s.*; a bull, 13*s.* 4*d.*; a black cow, 1*l.*; 2 red kine, 2*l.* 2*s.* 8*d.*; 6 young beasts, 3*l.*
- 1584.—12 kine, 20*l.*; a bull, 1*l.* 12*s.* 4*d.*; a bull segge and 3 whies, 5*l.* 6*s.* 8*d.*; 10 calves, 4*l.* 13*s.* 4*d.*
- 1587.—A tagged cow, 1*l.* 6*s.* 8*d.*; a white why, 1*l.* 6*s.* 8*d.*; 4 kine and 2 whies, 8*l.*; a cow and a stirk, 2*l.* 10*s.*
- 1588.—9 young beasts, 9*l.*; 18 steers and bulls, 30*l.*; 16 kine, 26*l.* 13*s.* 4*d.*; 12 fat beasts, 20*l.*; 5 calves, 8*l.*; 15 calves, 8*l.*
- 1589.—12 kine and a red bull, 20*l.*; 5 bulls and 2 whies, 8*l.*; 3 whies with calf, 4*l.* 6*s.* 8*d.*; a doake brown why, 15*s.*; a sad brown why, 13*s.* 4*d.*; a red cow, 2*l.* 3*s.* 4*d.*; 7 young beasts, 4*l.*
- 1590.—A fat ox and a fat cow, 3*l.* 6*s.* 8*d.*; 2 dun kine, 4*l.*; other 6 kine, 9*l.*
- 1591.—3 two year old bulls, 2*l.*; 10 milk kine, 13*l.*; 13 stirkes, 7*l.* 16*s.*; 2 spanyng calves, 10*s.*; 18 young beasts at the standhecks, 18*l.*; 9 milk kine, 14*l.*; 29 fat cattle, 49*l.*
- 1596.—9 stirks and a brown ridge why, 7*l.*; a cow and calf 2*l.*; a why stirk 2 years old 10*s.*; 10 milk kine and why in calf, 16*l.* 10*s.*; 7 milk kine, 12*l.* 10*s.*; a black "frayned faced" cow, 1*l.* 18*s.* 4*d.*; 4 young beasts, a flect cow, and a black steer, 8*l.*; 2 kine, "one blacke, one rede, with croked hornes," 2*l.* 10*s.*
- 1597.—6 two-year old beasts, 4*l.*; 3 winterlings, 1*l.* 10*s.*
- 1598.—13 kine, a bull, and 12 calves, 48*l.*; 4 kine and a why, 8*l.*; 19 kine and a bull, 43*l.* 6*s.* 8*d.*; 12 young beasts, 20*l.*; 14 calves, 8*l.* 13*s.* 4*d.*
- 1601.—11 kine, 17*l.*; 7 steers and 6 whies, 15*l.*
- 1610.—A sturdy why, 2*s.*; a red cow, 2*l.*; a little black why, 1*l.*; a brown why, 1*l.* 3*s.* 4*d.*; a white why and a red why with a white "leske," 3*l.* 6*s.* 8*d.*; a flect bull and a branded bull, 2*l.* 3*s.* 4*d.*; 3 kine, 5*l.*; 6 kine and a why, 12*l.*; 14 kine 28*l.*; 2 bulls, 4*l.*; 3 stirks and 6 calves, 6*l.*
- 1612.—A black cow with some white spangs, 30*s.*
- 1614.—A cow 2*l.* 10*s.*; a black cow and calf, 2*l.* 12*s.*; 4 kine, 9*l.*; a flecked why stirk, 17*s.*; 3 calves at stake, 1*l.* 4*s.*; 4 spanyng calves, 2*l.*
- 1615.—8 newtid kine and 9 calves, 21*l.* 6*s.* 8*d.*; 10 young beasts, 15*l.*; 3 beasts, 9*l.*; 9 young beasts, 10*l.* 10*s.* 10 kine and a young calf, 16*l.* 13*s.* 4*d.*
- 1616.—6 kine, 14*l.*; 2 bulls, 4*l.*
- 1618.—A cow and calf, 2*l.* 6*s.* 8*d.*; 2 whies and 2 stotts 9*l.*; 8 kine and a bull, 21*l.*; 2 drape kine, 3*l.* 6*s.* 8*d.*; a rigge ll cow, 1*l.* 13*s.* 4*d.*
- 1624.—A feathered cow, 2*l.* 6*s.* 8*d.*; a hauked cow, 2*l.*
- 1625.—A brown cow, 2*l.* 10*s.*; 2 kine, 5*l.* 6*s.* 8*d.*; a halked quy, 1*l.* 10*s.*; a fleckt why, 1*l.* 6*s.* 8*d.*; 13 young beasts, 20*l.*; 7 kine and a bull, 20*l.*; 8 two year-old beasts, 10*l.*
- 1632.—A grimmed why, 1*l.* 10*s.*
- 1637.—4 kine and 2 whies, 15*l.* 10*s.*; 5 kine and a bull, 17*l.*; a red why, 2*l.*
- 1638.—13 kine, 32*l.*; a black cow,

- 2*l.* 6*s.* 8*d.*; a bull and bull segg, 4*l.* 10*s.*; 2 newtid kine, 6*l.* 10*s.*
- 1639.—A black cow called "Sülk," 1*l.* 13*s.* 4*d.*; a black why called "Motherlyk," 1*l.* 3*s.* 4*d.*; a black cow called "Alblack," 1*l.* 13*s.* 4*d.*; a black why called "Tynd Ell," 1*l.* 13*s.* 4*d.*
- 1642.—A black cow with white under the belly, 3*l.*; 2 whies of their first calves, 3*l.* 3*s.* 4*d.*; 2 calves, 1*l.* 3*s.* 4*d.*
- 1643.—4 beasts sold, 6*l.* 16*s.*; 2 steers and 2 whies sold 4*l.*
- 1644.—12 kine and a bull, 21*l.*; 2 kine, 3*l.* 6*s.* 8*d.*; 3 kine and a bull, 8*l.*; 7 calves, 2*l.*; a calf, 2*s.* 6*d.*; a bull segg, a black cow, and 2 calves, 5*l.*
- 1650.—14 kine and a bull, 37*l.* 10*s.*; 3 little stirks, 4*l.* 10*s.*; 3 feeding steers and 2 whies, 10*l.*
- 1651.—A brown cow, 5*l.*; 3 kine and a runnet calf, 12*l.*; a black spanyed cow, 4*l.* 6*s.* 8*d.*; 2 calves, 2*l.* 5*s.*
- 1653.—A stornde cow and a black cow, 2*l.* 10*s.*
- 1657.—10 fat beasts, 30*l.*; 3 whies, a bull, and 2 runners, 8*l.*; 2 cows, 5*l.* 10*s.*
- 1658.—3 kine and 3 calves, 9*l.*; 8 young beasts, 14*l.*; 5 cows and a calf, 15*l.* 10*s.*; 4 drape kine, 9*l.* 6*s.* 8*d.*; 2 calves, 1*l.* 4*s.*; a black cow called "Flowrell," 1*l.* 10*s.*; a bull, 2*l.* 4*s.*; 2 kine, 6*l.*
- 1661.—8 fat beasts, being 3 steers and 5 kine, 24*l.*
- 1662.—A why and a bull calf, 3*l.*; 4 kine, 10*l.*; 12 kine, 34*l.*; 3 whies and 2 calves, 10*l.*; an old cow and a little why, 5*l.*; 4 fat steers, 2 kine, and 11 spanyng calves, 23*l.*; 11 yearlings, 10*l.*
- 1664.—7 kine, a runner, and a calf, 17*l.* 10*s.*; 4 stirkes, 6*l.*; 5 spanyng calves, 2*l.* 5*s.*
- 1665.—8 kine, 20*l.*; 9 young beasts, 12*l.* 13*s.* 4*d.*; 5 calves, 3*l.* 6*s.* 8*d.*
- 1667.—5 calves at stake, 1*l.*; 9 yearling calves, 3*l.*; 11 beasts at the hecks, 11*l.*; 12 kine, 12*l.*
- 1668.—8 kine and a bull, 20*l.*; 12 three-year old and 2 one-year old beasts, 18*l.*; 8 small beasts, 10*l.* 13*s.* 4*d.*; a fat cow, 1*l.* 15*s.*
- 1672.—5 cows sold for 13*l.* 17*s.*; 8 young beasts sold for 11*l.* 8*s.*
- 1679.—4 heifers and a steer, 8*l.*; a sucking calf, 8*s.*; a *starne* cow and calf, 2*l.* 10*s.*; a black why, 2*l.* 10*s.*; a red hauck cow, 2*l.* 3*s.* 4*d.*; 6 milk kine with their pasture, 12*l.*; 5 feeding beasts with their pasture, 10*l.*; 11 feeding beasts with their pasture, 28*l.*; 5 young beasts, 8*l.*
- 1680.—5 drape cows, 10*l.*
- 1681.—8 yearling calves, 4*l.*; 4 weaning calves, 1*l.*; a bull segg, 4*l.* 10*s.*
- 1688.—A *newtid* cow and calf, 2 drape cows, a two-year calf and a yearling, 5*l.* 13*s.* 4*d.*; 5 cows, 10*l.*; 2 kine, 2 yearling stirks, 5*l.*
- 1695.—11 young beasts, 22*l.*; 15 beasts, 37*l.*; 7 milk cows, 26*l.*; 14 two-year old beasts, 21*l.*
- 1700.—A motley cow and her calf, 2*l.* 13*s.* 4*d.*; 4 drape kine, 10*l.* 6*s.*; a newtid cow, 3*l.* 13*s.* 4*d.*; 3 young heifers, 6*l.* 10*s.*; 3 younger heifers, 4*l.* 7*s.* 6*d.*; 3 young calves, 1*l.* 17*s.* 6*d.*; 11 kine and a bull, 35*l.*
- 1711.—4 milk kine, 18*l.*; a why, 3*l.* 5*s.*
- 1712.—A bull, 2*l.* 10*s.*; 3 milk kine, 10*l.*
- 1715.—3 cows and 19 calves, 32*l.*; 5 calves, 2*l.* 10*s.*; 9 milk cows in calver, 33*l.* 15*s.*; 22 young beasts, 38*l.* 10*s.*; 6 fat beasts and a bull, 31*l.*
- 1719.—9 cows and a bull, 35*l.*; 4 heifers, 11*l.*
- 1724.—A cow sold for 4*l.* 5*s.*; 3 fat cows, 10*l.* 10*s.*; a milk cow, 2*l.* 15*s.*; 6 fat beasts, 15*l.*; 3 spanyng calves, 8*l.*
- 1737.—2 spaining calves, 5*s.*; 4 cows, 10*l.* 10*s.*
- 1738.—A flect cow sold, 1*l.* 10*s.* 6*d.*; a why sold, 1*l.* 9*s.*; a why calf, 11*s.* 6*d.*
- 1742.—Grey cow and three pap cow, 2*l.* 10*s.*; 3 other cows, 13*l.* 5*s.*; a bull, 2*l.* 10*s.*; 4 calves, 5*l.*; a broken horned cow, 2*l.* 10*s.*; a yellow heifer, 2*l.* 10*s.*; a cow with calf, 4*l.*
- 1754.—3 cows, 13*l.*; 3 calves, 4*l.* 5*s.*
- 1758.—2 milk cows, 5*l.* 10*s.*; 6 young beasts, 14*l.*; 5 cows, 18*l.*; a red cow, 3*l.*; a cow and calf, 4*l.* 15*s.*; a black cow and calf, 5*l.* 10*s.*; a red grisseld

- why, 2*l*.; a red why and calf, 3*l*. 15*s*.; a cow and calf red grey, 5*l*.
 1760.—2 heifers, 6*l*.; 4 cows, 20*l*.; 2 ox beasts and a cow, 14*l*. 10*s*.
 1766.—A milk cow, 5*l*. 7*s*. 6*d*.; a drupe cow, 5*l*.; a why, 5*l*. 2*s*. 6*d*.; 2 one-year old heifers, 5*l*.; a two-year old heifer, 3*l*. 5*s*.; 3 three-year old heifers, 12*l*.
 1769.—3 milk cows, 12*l*.; a calf at stake, 15*s*.; 2 one-year old calves, 4*l*.
 1772.—A red and white why, 3*l*. 16*s*.; 3 stirks, 6*l*. 6*s*.; a cow uncalved, 6*l*.; 2 cows and calves, 13*l*. 10*s*.; 3 milk cows, 16*l*. 16*s*.; 2 milk cows, 12*l*.; 5 young beasts, 15*l*.; 6 young beasts, 21*l*.
 1773.—A cow and calf, 9*l*.
 1775.—A yellow cow, 5*l*. 5*s*.; a flect cow, 5*l*. 5*s*.; 2 yearling calves, 5*l*.
 1778.—6 cows, 2 three-year old steers, 49*l*.; 6 two-year old beasts, 20*l*. 10*s*.; 3 one-year old calves and 2 kit calves, 9*l*. 13*s*.
 1783.—A cow and calf sold, 7*l*. 10*s*.; a yearling calf, 2*l*. 10*s*.; an incolver sold, 5*l*. 16*s*.
 1784.—4 kine and 2 calves, 23*l*.

William Gunby of Reedness, June 22, 1596, gives "to Richard Gunbie, my sowne, a blacke starned cowe, a broun quye three yeres olde."

Nicholas Fisher "of Carlton, alias of Cotes, in the pariahe of Snaythe," Apr. 16, 1591, gives to "Margery Adam one little donde fillye and one blacke hauked cow called "Langleggs;" to his uncle William Adam, his Scoothe dager. The Hall there is styled, in 1779, "Broom House, commonly called Coates Hall." Par Reg.

Marmaduke Stapleton of Rudlif, by Will proved July 10, 1612, gives to his sons Robert and Thomas "two cows called Sternell and Alblacke," and to his son John "one garded cow being my best cow."

Henry Motherby of Cowick, Sept. 5, 1617, gives his wife a gray mare called "Petcher," and a black quye called "Nuttie."

(3.) OXEN and STOTTS.

It is not often that we find Oxen used as beasts of burthen. In the stone quarries near Whitby they are still largely employed; and I remember to have seen at Howden a bull drawing a dray laden with oilcake. The ox-plough, however, is no longer in fashion in Yorkshire. Remembering that not only the plough but the waggon was formerly drawn by oxen, and therefore a value attached to them independent of their fitness for the butcher, they appear to merit separate consideration. It will be seen that they were considerably dearer than horses.

- 1570.—2 oxen, and 2 stotts, 5*l*. 13*s*. 4*d*.
 1571.—4 oxen, 8*l*.; 2 stotts four years old, 3*l*. 6*s*. 8*d*.
 1572.—One yoke of oxen, 6*l*.; 5 stotts, 2*l*. 10*s*.; 4 oxen, 4 stotts, a cow and a calf, 11*l*.
 1577.—2 steers, 2*l*. 13*s*. 4*d*.; a yoke of oxen, 4*l*. 13*s*.; 4 oxen, 13*l*.
 1578.—2 stotts, 2*l*. 13*s*. 4*d*.; 4 stotts, 4*l*. 13*s*. 4*d*.; 6 oxen, 13*l*. 13*s*. 4*d*.; 3 stotts, 4*l*. 6*s*. 8*d*.
 1580.—4 oxen, 6*l*.; 2 stotts, 1*l*. 10*s*.
 1581.—6 oxen, 8*l*.; a stott a year old, 10*s*.; 2 oxen and 3 stotts, 5*l*.
 1582.—One spanged stotte, 1*l*. 6*s*. 8*d*.
 1583.—2 oxen, 2*l*. 5*s*.; 2 oxen, 4*l*.
 1584.—4 oxen, 11*l*.; 2 three-year old stotts, 3*l*. 6*s*. 8*d*.
 1586.—3 oxen, 9*l*. 10*s*.; 4 oxen, 8*l*.; 3 stotts, 3*l*. 6*s*. 8*d*.; a yoke of oxen, 6*l*. 13*s*. 4*d*.; another yoke of oxen, 5*l*.; a white stott, 1*l*. 10*s*.
 1587.—2 oxen, viz.; "Bell" and "Swaine," 6*l*.; 2 oxen, viz.; "Bell" and "Golding," 5*l*. 10*s*.; 4 draught stotts, 8*l*.; a yoke of stotts, 4*l*.; a stott, 1*l*. 6*s*. 8*d*.; 6 oxen, 16*l*.
 1589.—2 great stotts, 2*l*. 15*s*.; an ox, 2*l*. 13*s*. 4*d*.
 1590.—2 drawn stotts, 3*l*.
 1591.—14 draught oxen, 41*l*.; 7 stotts and a why, 13*l*. 6*s*. 8*d*.

- 1596.—a yoke of oxen, 5*l.* 6*s.* 8*d.*; 8 oxen, and 4 stotts, 30*l.*; 2 ox stirks, 1*l.* 2*s.*
- 1598.—4 oxen, 19*l.*; 2 oxen and 2 stotts, 10*l.* 13*s.* 4*d.*; 12 oxen, 44*l.*; 6 stotts and a why, 16*l.*
- 1601.—10 oxen, 26*l.* 11*s.*
- 1604.—2 stotts sold for 4*l.*; a yoke of oxen, 5*l.* 6*s.* 8*d.*
- 1605.—8 oxen, 24*l.*
- 1610.—An ox and 2 stotts, 10*l.*; 3 oxen, 11*l.*; 2 steers, 4*l.* 13*s.* 4*d.*
- 1612.—A yoke of oxen, 7*l.*; 2 stott stirks, 1*l.*; 2 stotts, 3*l.* 6*s.* 8*d.*; 4 oxen, 12*l.* 10*s.*
- 1613.—6 oxen, 23*l.*; 2 stotts, 3*l.* 13*s.* 4*d.*
- 1614.—2 oxen, 6*l.* 13*s.* 4*d.*
- 1615.—A fat ox, 4*l.*
- 1616.—3 stotts, 5*l.*; 3 oxen, 26*l.*
- 1618.—4 oxen and 2 stotts, 20*l.*; a yoke of oxen, 7*l.*
- 1619.—A yoke of oxen, 7*l.* 16*s.* 8*d.*; a yoke of oxen, 6*l.* 13*s.* 4*d.*
- 1625.—10 oxen, 40*l.*
- 1637.—4 oxen, and 2 steers 5 years old, 26*l.*; 2 stotts, a year old, 5*l.*; 3 yoke of oxen, 24*l.*; a yoke of black oxen, 11*l.*; 4 steers, 11*l.*
- 1643.—4 oxen sold, 10*l.* 10*s.*
- 1644.—3 oxen, 6*l.*
- 1650.—8 oxen, 34*l.*; 2 steers, 6*l.*
- 1657.—4 oxen and 3 steers, 20*l.*; 6 draught oxen, 20*l.*
- 1658.—2 oxen 7*l.*; a yoke of oxen, 8*l.* 15*s.*; a yoke of steers, 4*l.* 10*s.*; a steer, 1*l.* 15*s.*
- 1660.—A pair of oxen and 2 pair of steers, 21*l.*
- 1664.—2 oxen, 10*l.**
- 1665.—6 oxen, 25*l.*
- 1679.—2 oxen and 2 steers, 13*l.* 6*s.* 8*d.*; a pair of oxen, 12*l.*; a pair of steers four years old, 5*l.*; a pair of steers 3 years old, 4*l.*; a pair of steers, 3 years old, 3*l.* 5*s.*
- 1686.—6 oxen, 27*l.*
- 1687.—4 standheck steers, 7*l.* 15*s.*
- 1688.—6 oxen, 20*l.*; 2 pair of oxen, 13*l.* 10*s.*; 3 steers, 4*l.* 10*s.*; 4 oxen, 18*l.*
- 1697.—2 oxen, 9*l.* 2*s.*
- 1703.—4 oxen, 12*l.*; a poor ox, 10*s.*
- 1712.—4 oxen, 18*l.*; 4 steers, 8*l.*; 2 steers, 8*l.*
- 1715.—2 steers, 3*l.* 10*s.*
- 1719.—3 oxen, 11*l.*
- 1720.—4 bullocks or oxen, 20*l.*
- 1723.—4 bullocks, 8*l.*
- 1728.—2 bullocks, 2 heifers, and a steer, 20*l.*
- 1732.—4 bullocks, 8*l.*; 4 bullocks, 14*l.* 10*s.*
- 1735.—5 steers, 14*l.*
- 1739.—2 stotts in the fold, 4*l.*
- 1751.—A young steer, 1*l.*
- 1754.—2 steers, 9*l.*
- 1758.—A red steer, 2*l.*
- 1760.—4 ox beasts, 14*l.* 10*s.*
- 1762.—2 yearling steers, 5*l.* 10*s.*
- 1772.—2 stotts, 4*l.* 10*s.*

(4.) GOATS.

I have found but one notice of this animal, in the Inventory of a man of Cowick, 1659, who possessed three which were valued at 1*l.* Of the Ass, now plentiful in the district, (for I remember being told how thirty-three persons, each mounted on one, formed a potter's wedding cavalcade,) I have not found one instance.

(5.) SHEEP.

Very few seem to have been kept in this district. A part only of the great common of Dykesmarsh was in the parish. At the inclosure, in 1754, the tithe of wool and lambs, geese and goslings, of Snaith and Cowick only was commuted for lands estimated to be worth 25*l.* a-year.

* Robert Bawne of Gowdall leaves (1664, Apr. 17) to Wm. Cobcroft a paire of blacke steares called "Peate" and "Storresperd," a mair called "Greissell," and a brown mayre, but his wife is to have the use of them till Martinmass.

- 1568.—7 score and 12 sheep, 23*l*. 10*s*.
 1569.—2 ewes, 6*s*. 8*d*.; 4 couple ewes and ambs, 12*s*.; 12 gelt sheep, 1*l*. 4*s*.
 1570.—37 old sheep and 10 lambs, 4*l*. 12*s*.
 1571.—4 ewes and a hogg, 15*s*.; 8 old heep and 4 lambs, 1*l*. 6*s*. 8*d*.; a ewe and lamb, 6*s*.; 11 couple of sheep, 2*l*. 4*s*.; a cade lame, 2*s*. 4*d*.
 1572.—22 sheep, 3*l*.; 14 sheep and 4 ambs, 2*l*.
 1577.—9 ewes and 9 lambs, 1*l*. 16*s*.; a ewe and lamb, 4*s*.; 34 sheep, 5*l*. 6*s*. 8*d*.
 1578.—13 couple of ewes and lambs, 2*l*. 19*s*. 4*d*.; 8 geld sheep, 1*l*. 6*s*. 8*d*.; 9 old sheep and 5 lambs, 2*l*.
 1580.—29 sheep, 3*l*. 6*s*. 8*d*.; 4 score sheep and 8 lambs, 12*l*.
 1581.—60 old sheep and 28 lambs, 12*l*.
 1582.—25 couple of ewes and lambs, 5*l*. 13*s*. 4*d*.; 24 sheep, 4*l*. 6*s*. 8*d*.
 1586.—20 sheep, 2*l*.
 1588.—53 sheep, 11*l*. 13*s*. 4*d*.
 1591.—20 sheep, young and old, 6*l*.
 1592.—18 ewes and 18 lambs, 5*l*.; 20 geld sheep, 4*l*. 13*s*. 4*d*.; 2 ewes, 12*s*.; 2 couple of sheep and a tup, 1*l*.; 40 ewes, 11*l*.; 20 geld sheep, 5*l*. 10*s*.
 1593.—9 wethers, 3*l*.
 1596.—A ewe, 3*s*. 4*d*.; a tup hogg, 2*s*. 6*d*.
 1597.—A ewe and a lamb, 6*s*.
 1598.—3 score and 5 sheep, 15*l*. 3*s*. 4*d*.; 10 ewes, 10 lambs, and 12 geld sheep, 6*l*.
 1605.—31 sheep, 9*l*.; 4 score and 15 sheep, 88*l*.; a cade sheep, 10*s*.; 24 old sheep and 8 lambs, 6*l*.
 1610.—A ewe, a lamb, and a gimmer, 10*s*.
 1614.—12 sheep and 5 lambs, 3*l*.; 12 old sheep and 2 lambs, 2*l*.; a dodded lamb, 2*s*.; 13 ewes and lambs, 4 wethers and 16 other sheep, 7*l*. 15*s*. 8*d*.; 33 sheep, 7*l*. 10*s*.
 1624.—A ewe, a lamb, and a wether hog, 15*s*.; a couple of sheep and 9 stack barns, 13*s*. 4*d*.; 5 sheep, 1*l*.
 1630.—2 tup shearings and a gimmer shearing, 7*s*.; 2 half tups, 6*s*.
 1639.—3 ewes and lambs, 15*s*.; 12 sheep and 5 lambs, 3*l*. 6*s*. 8*d*.; 5 ewes, 1*l*. 13*s*. 4*d*.; 12 sheep, 4*l*.
 1640.—20 ewes and 20 lambs, 9*l*.
 1651.—14 lambs, 4*l*. 13*s*. 4*d*.
 1653.—5 sheep, 2*l*.
 1656.—68 sheep, 21*l*. 6*s*. 8*d*.; 20 sheep, 8*l*. 13*s*. 4*d*.; 260 sheep on Dikesmarsh, 76*l*.
 1658.—45 sheep, 9*l*.; 2 ewes and 1 ewe lamb, 16*s*.; 6 couple of ewes and lambs and 2 geld sheep, 2*l*.; 21 sheep, 4*l*. 10*s*.; 70 sheep, 10*l*.
 1667.—40 sheep, young and old, 8*l*.; 40 sheep, 7*l*.; 19 sheep, 4*l*. 13*s*. 4*d*.
 1678.—7 sheep, 2*l*. 6*s*. 8*d*.; a score of sheep and 5 lambs, 4*l*.
 1687.—50 wethers, 17*l*. 10*s*.; 9 yearling lambs, 1*l*. 10*s*.; 20 geld sheep, 4*l*. 10*s*.; 19 couple of ewes and lambs, 5*l*. 14*s*.
 1695.—90 wethers, 40 couple of ewes and lambs, and 68 ewes, (Swifleet), 90*l*.
 1699.—33 sheep, 7*l*.; 17 sheep, 4*l*. 10*s*.; 2 couple of ewes and lambs, 1*l*. 1*s*.
 1707.—80 sheep, 16*l*.
 1718.—7 sheep and 6 lambs, 2*l*. 12*s*. 6*d*.
 1719.—28 wether sheep and ewe hogs, 10*l*. 10*s*.; 12 couple of ewes and lambs, 4*l*. 16*s*.; 5 sheep, 1*l*.
 1724.—33 sheep, 9*l*.; 47 sheep, young and old, 10*l*.; 1 ewe and 2 lambs, 10*s*.
 1732.—30 sheep, 11*l*.
 1738.—4 couple of sheep and 3 yearings, 1*l*. 10*s*.; 24 sheep, 7*l*. 10*s*.
 1746.—30 sheep, 8*l*.
 1748.—9 old sheep at 3*s*. 6*d*., and 8 lambs at 2*s*. 6*d*. each, 2*l*. 11*s*. 6*d*.; 27 hogs, 6*l*. 10*s*.
 1751.—40 wethers, 13*l*. 10*s*.; 89 sheep, at 4*s*. 3*d*. each, 18*l*. 18*s*. 3*d*.; 20 lambs, 1*l*. 10*s*.
 1754.—42 sheep, 11*l*.
 1761.—60 sheep, 15*l*.
 1767.—18 sheep, 8*l*. 5*s*.; 20 couple of ewes and lambs, 8*l*.
 1772.—10 sheep, 5*l*.
 1778.—6 sheep and 2 lambs, 4*l*. 10*s*.

(6.) Pigs

Seem to have been kept in large quantities, and were very cheap. They were allowed, no doubt, to range wide, under the care of a swineherd, who was responsible for their safety: and would find plenty of food, beech and oak mast, in the forests; and plenty of mud in which to wallow, in the swamps and carrea.

- 1568.—25 swine, 3 geese, and 3 ducks, 4*l.* 6*s.*
 1569.—3 swyne, 17*s.*; 1 sow and 1 holding swine, 5*s.*
 1578.—12 swine. 40*s.*; 5 old swine and 3 holdings, 1*l.* 10*s.*; a sow and hog, 16*s.*
 1580.—A sow and 3 pigs, 6*s.* 8*d.*
 1581.—2 sows and 6 holding swine, 1*l.*
 1582.—10 little pigs, 10*s.*; 18 swine, 2*l.* 13*s.* 4*d.*
 1584.—2 fat swine, 3 field swine, and 4 pigs, 1*l.* 10*s.*
 1587.—A fat swine, 2*s.* 4*d.*
 1588.—A sow and 10 holding swine, 1*l.* 16*s.* 8*d.*; 3 holding swine, 10*s.*; 12 old swine, 4 shoots, and 11 holding pigs, 6*l.*
 1598.—A bore, 10*s.*; 6 great swine and 4 holding pigs, 3*l.* 13*s.* 4*d.*; a sow, 4*s.*; a gilt, a hog, and 3 pigs, 16*s.*; a swine hog, 8*s.*; a sow, 5*s.*
 1608.—A sow and 6 pigs, 10*s.*; a sow and 2 shoots, 15*s.*; a five-year-old gilt and 6 pigs, 1*l.*; 2 young swine, 6*s.* 8*d.*
 1615.—3 fat swine, 1*l.* 16*s.*; 6 young holding swine, 1*l.* 10*s.*; 2 holding sows, 16*s.*; a brawne, 12*s.*
 1618.—4 little swine, 1*l.*; 4 swine, 1*l.* 12*s.*
 1627.—2 fat hogs and 9 lean swine, 2*l.* 16*s.*; a sow in the pile, 5*s.*
 1628.—7 swine, 2*l.*; 2 sows and 5 pigs, 1*l.* 6*s.* 8*d.*; 2 holding swine, 5*s.*; a pig, 8*s.* 4*d.*
 1631.—A hog pig, called "Obrey," 5*s.*
 1638.—4 swine, 2*l.* 13*s.*; a sow and 2 holdings, 1*l.* 6*s.* 8*d.*; 4 pigs, 8*s.*
 1648.—A swine, 10*s.*; a little pig, 2*s.*
 1658.—A pig, 7*s.*; a little pig, 2*s.* 6*d.*; 1 brawne, 2 hogs, 3 sows, 1 lease and her 6 pigs, 5*l.*
 1668.—A pig, 4*s.*; 23 swine, 10*l.*
 1678.—An old sow, 2 little pigs, 5 holding swine, 2*l.* 5*s.*; a pig, 8*s.*; a sow and 4 pigs, 1*l.*
 1688.—A gilt and 2 pigs, 1*l.*; a pig, 5*s.*; a sow and 8 pigs, 2*l.*; a pig, 6*s.* 8*d.*
 1698.—2 pigs, 13*s.* 4*d.*; 3 swine, 2*l.*; 1 gilt pig, 10*s.*
 1707.—A sow and gilt, 1*l.* 7*s.* 6*d.*; a sow, 10*s.*
 1715.—2 fat swine, 3*l.*
 1718.—2 pigs, 1*l.* 10*s.*; 1 sow, 3 pigs, and 5 other pigs, 3*l.* 10*s.*
 1719.—7 pigs, 1*l.* 5*s.*
 1728.—A sow, 15*s.*; 1 sow and 8 holding pigs, 3*l.* 10*s.*; 2 sows and 4 pigs, 2*l.*
 1738.—A pig, 1*l.*; a pig, 13*s.*; a gilt, 4 little pigs, and one a little bigger, 1*l.*
 1748.—A sow and 8 pigs, 2*l.* 10*s.*; 3 pigs, 3*l.* 3*s.*
 1758.—A pig, 1*l.* 10*s.*; 2 pigs, 5*l.*
 1768.—A pig, 1*l.* 10*s.*; a pig, 12*s.* 6*d.*
 1778.—3 pigs, 2*l.* 10*s.*; 1 sow and 7 pigs, 1*l.*
 1784.—2 pigs, 1*l.*

(7.) COCKS and HENS, CHICKENS, GESE, DUCKS, TURKIES.

- 1568.—13 pullen, 3*s.* 4*d.*
 1569.—A cock and 6 hens, 2*s.*
 1571.—A pig, 15 ducks, and 4 hens, 3*s.* 4*d.*; 2 hens, 8*d.*; a cock, 2*d.*; 2 chickens, 2*d.*; a cock and 7 hens, 2*s.*
 1572.—A cock and 3 hens, 1*s.*; a goose, 1*s.*; a cock and 4 hens, 1*s.* 8*d.*
 1575.—A cock, 5 hens, and 2 capons, 4*s.*; 3 geese, 1*s.* 6*d.*
 1577.—13 geese, 5 ducks, a drake, and 20 pullen, 13*s.* 4*d.*; 3 old geese, a gander, 13 young geese, and 4 hens, 10*s.*; 6 geese, 2*s.*; 2 pullets, a cock, and 3 hens, 1*s.* 4*d.*
 1578.—A Turkey cock and 2 Turkey hens, 5*s.*; 3 young geese, 1*s.* 6*d.*; 16 hens, 2 capons, and 2 cocks, 7*s.*
 1579.—8 geese, a gander, and 4 hens, 6*s.* 8*d.*; a cock, 3 hens, 12 geese, and 8 ducks, 9*s.*

- 1580.—A cock and 2 hens, 8*d.*; 6 geese and stegs, a cock and 5 hens, 6*s.*
 1581.—2 geese, a steg, and 8 goalings, 2*s.* 4*d.*; 3 ducks, 12*d.*
 1587.—A cock and 5 hens, 2*s.*; 2 geese and a gander, 3*s.*; 3 old geese, a steg, and 3 young ones, 6*s.*; 5 hens, a cock, and a capon, 2*s.* 4*d.*; 7 old geese and 7 young ones, 9*s.* 6*d.*
 1598.—A cock and 4 hens, 2*s.*; 3 hens, 4 pullets, and 2 "cockrells," 3*s.*; 16 geese, 1*l.*; 4 "Turkes," 10*s.*; a cock and hen, 8*d.*; 2 geese and a steg, 2*s.*
 1609.—2 hens, 1*s.*; 3 geese and a steg, 2*s.*; a capon, 3 cocks, and 9 hens, 4*s.*; a Turkye cock and 2 hens, 4*s.*; a gander, 2 geese, and 8 "gibs," 5*s.*
 1612.—A cock and 5 hens, 2*s.* 6*d.*; 3 ducks, 1*s.*; one peacock, 2*s.* 6*d.*; 14 geese, young and old, 6*s.*; a cock, 4 hens, and 2 capons, 3*s.*; a gander, a goose, and 10 gessylngs, 3*s.* 4*d.*
 1618.—A cock, and 3 hens, 1*s.* 8*d.*; 6 old geese, 12*s.*; a cock and 6 hens, 3*s.*; a goose and a steg, 2*s.*
 1624.—10 ducks, 3 mallards, and 10 yonge ducklings, 3*s.*; 2 cocks and 16 hens, 6*s.*; 2 Turkye hens and 4 young ones, 3*s.*; 4 old geese, 2 steggs, and 37 young geese, 1*l.*
 1627.—32 geese, 5 ducks, 2 mallards, 4 cocks, certaine hens, and a Turkey, 1*l.*; a cock and 7 hens, 2*s.* 8*d.*; 2 geese and a gander, 4*s.*
 1637.—4 geese, a gander, 4 ducks, a mallard, and 10 pullen, 10*s.*; 3 old geese and a gander, 7*s.*; a cock and 3 hens, 2*s.*; 3 hens and 3 chickens, 2*s.*
 1639.—13 ducks and drakes, 4*s.*; 4 geese, 2 ganders, and their gosylngs, 10*s.*; 4 turkes, 8*s.*; 20 cocks and hens, 10*s.*
 1646.—A cock and 8 hens, 4*s.*; 4 geese and a gander, 5*s.*; 3 old geese, a gander, and their young ones, 10*s.*
 1657.—A cock and 4 hens, 1*s.* 8*d.*; 2 hens, 8*d.*; 2 geese and a gander, 3*s.* 4*d.*; 7 geese and a gander, 8*s.*; 6 hens and a cock, 3*s.* 6*d.*; 6 chickens, 1*s.* 6*d.*
 1659.—Six turkeys, a cock, 8 hens and chickens, 1*l.* 10*s.* 10*d.*; 2 ganders and 6 geese, 8*s.*; 13 ducks and mallards, 4*s.* 4*d.*
 1667.—5 geese and a gander, 10*s.*; a cock and 10 hens, 5*s.*; 7 ducks and 2 mallards, 4*s.* 6*d.*; 3 geese, 2*s.* 4*d.*; 12 geese, 7*s.* 6*d.*
 1679.—A goose, a gander, a cock, 6 hens, a mallard, and a duck, 6*s.*
 1680.—2 Turkey cocks, 3 geese and a gander, some goalings, 8 hens, and other poultry, 15*s.*
 1681.—2 geese and a gander, 4*s.*; a cock and 4 hens, 2*s.*; 8 ducks, 2*s.* 8*d.*
 1694.—2 geese and a gander, 4*s.* 6*d.*; a cock and 2 hens, 1*s.* 6*d.*; 4 geese, a steg, and goalings, 10*s.*
 1709.—7 pullets, 2*s.* 4*d.*; 4 geese and ganders, 6*s.*
 1712.—2 geese and a gander, 3*s.*
 1727.—11 geese and 30 cocks and hens, 1*l.* 10*s.* 6*d.*
 1732.—A gander and 3 geese, 4*s.*; a cock and hen, 1*s.*
 1742.—9 hens and chickens, 5*s.*; 4 ducks with geese, 12*s.*
 1747.—1 Ganner, 3 geese, and 21 goalings, 12*s.*; 1 drake and 5 ducks, 2*s.*; 1 cock and 2 hens, 1*s.* 6*d.*
 1749.—5 geese and 2 hens, 8*s.* 6*d.*
 1756.—3 geese and other pullen, 9*s.*; 5 geese and 20 hens, 13*s.*

1454.—April 8.—Richard Dauson, of Rouclyff, stole 4 hens, value 8*d.*, of the goods of Henry Alkbarowe.—Snath Court Rolls.

V.—MISCELLANEOUS.—*Bricks; Boats; Linen; Various Articles.*

(1.) BRICKS.

- 1580.—200 tyles, 2*s.*
 1638.—A hundred of brick, 1*s.* 4*d.*
 1648.—2 qrs. of lyme, 4*s.*; certain bricke, 1*l.*
 1654.—Armin Brick Garth.—Raw bricks, 1*l.* 10*s.*; boards, barrows, and tubs, 1*l.* 8*s.*; burnt tyles, 1*l.* 10*s.*; for pavers, 3*l.* 10*s.*; rigging tiles, 1*l.* 4*s.*;

gutter tyles, 1*l.* 4*s.*; coals, 5*l.*; a kiln of burnt brick, 15*l.* 10*s.*
 1659.—Inv. Thomas Gleadow of Cowick, Potter, a standheck and a wheelbarrow, 4*s.*; 7 graves, 7*s.*; one ack, a spar, and other wood, 5*s.*; the pott rill and the shilter, 1*l.* 10*s.*; the cart and 3 black oak pieces, 5*s.*; the pott bordes and the pot wheel and frame, 15*s.*; 1 soe, 2 tubs, and hualement, 3*s.*
 1666.—A hundred of bricks, 1*s.*

1682.—A cratch, a spaid, and 200 of bricks, 3*s.* 4*d.*
 1683.—About 30,000 of clay dug, 1*l.* 10*s.*
 1688.—8 load of bricks leading for my Lord, 4*s.*
 1690.—2 sacks of lime, 2*s.*
 1694.—15,000 bricks, 6*l.*
 1718.—30,000 bricks, 10*l.*
 1720.—377 Holland tiles, 12*s.*
 1754.—20,000 bricks at 10*s.* the 1,000, 10*l.*

In 1394, bricks sold at 6*d.* the hundred, under the name of wall tiles, at Hedon; in 1582, bricks are valued at Barmston at 40*l.* per 100,000; in 1634, the charge for digging, turning, making, and burning brick (clay being found) was 3*s.* 8*d.* at Little Driffeld; and in 1728, 8*s.* the thousand, at Humbleton. Poulson's "Holdersness," vol. i., p. 220; vol. ii., pp. 76, 162; Best's "Farming Book," p. 161.

(2.) BOATS and NETS.

1569.—*Goole*.—Halfe of a shyppe called Martyn, 6*l.* 13*s.*; halfe of a shyppe called John of Gowell, 3*l.*; the stocke yt ys in John and Martyn, 6*l.*
 1575.—*Rawcliffe*.—The moytye and one halfe of a kele called the Michall, 10*l.*
 1580.—*Rawcliffe*.—Two-thirds of a kele called the Wylliam, 14*l.* 13*s.* 4*d.*; a quarter of a kele which is in buyldinge, 15*l.*; 2 boats and 2 netts, 7*l.*
 1581.—A keyle, 33*l.*
 1582.—Half the ferry bote at Whitgift, 5*l.*; * half a flue nette and 4 leapes, 4*s.*; 4 thighte netts, 1*l.* 10*s.*; 2 fisher boots, 1*l.* 10*s.*; a shove nett, 2*s.*
 1584.—4 kempers, 2 corke netts, 6*s.* 8*d.*
 1585.—Two byrdrnetts and one cord, 1*s.*; one hull bote with all her furniture, 1*l.* 10*s.*
 1586.—*Goeddall*.†—His fyshinge and

his geare, with all to the same, 8*l.*; his fowlinge geare, 6*s.* 8*d.*
 1589.—*Goeddall*.—His part of boots, netts, cheanes, and stockes, &c., 6*l.* 13*s.* 4*d.*; *Snaith*, a keele called the William, 15*l.*; a keele called Trenitie, 18*l.*
 1590.—2 ship leads, 6*d.*; a lead, 6*s.*; 2 coke netts with the lynes, 5*s.*
 1591.—A kele called the Michael with all the furniture belonging to her, 9*l.*; an old anker, 10*s.*; an old kele sayle, 6*s.*
 1592.—*Redness*.—A bote, 6 netts, 9 matts, 2 new ropes, with all the timber belonging to the fishe garthe, 6*l.*; 8 leapes, 5*s.*; a shove nett, 6*d.*; a stake nett, 6*d.*; a boat, a quarter of a signe, 5 netts, 2 flewes, and 3 wyde netts, 3*l.*

* Whitgift Ferry has been the scene of many accidents. Many of my readers will remember that of last year, and know the difficulty and dangers of the navigation. In Dec., 1614, Sir John, Sir Edmund, and Mr. Philip Sheffield, sons to Edmund Lord Sheffield, Earl of Mulgrave and President of the Council of the North, with all their retinue, were drowned here. Francis, son of John Estoft, Esq., of Estoft, by Rosamond, daughter and coheiress of Sandford Nevile of Chevet, is said by family tradition to have been drowned there circa 1700, and by his death his sisters became heirs to that estate. The Parish Register is full of the names of persons drowned. Amongst other casualties there is recorded:—

"1735, Sep. 22.—The ferry boat at Swinfleet was overset with 15 persons in it, 14 of whome miserably peris'h'd in ye River." The fishery at Whitgift was granted by William the Conqueror to Selby Abbey.

† 9 Ric. II., Oct. 16, 1385.—John Child de Hethensale and John Swynherd of Snayth are cited for fishing in the water called Dyke a salmon, price 6*d.* in a certain boat of John * * *

32 Hen. VI., Oct. 15, 1453.—A jury find that "John Holmeslay de Selby, fysher, apud Goldall garth in aqua de Ayre posuit lata pecia de id * * post finem nativitatibus Beate Marie, anno regis nunc 32do et cepit magnam multitudi-

- 1593.—The fishinge of Gowdall garthe and 4 upnetta, 2*l.*; 4 withnetta, 1*l.* 6*s.* 8*d.*; 4 lang kettles, 1*l.*; 4 shire nettes, 6*s.* 8*d.*; 3 iron chayne, 6*s.*; halfe of one boote called the Quarte boote, and one other boote, 2*l.* 8*s.* 4*d.*; the third part of one leade and of one doge, with a winding rope, 13*s.* 4*d.*; one ould keyle, 3 old doggs, one cable, and divers other shippe ropes, 2*l.*; one saile yearde, 3 steyes, and an iron forke, 7*s.*; all the shippe bords and other wood in the garthe, 1*l.*; an old nett with 2 stones, 4*d.*
- 1596.—A gable rope with a kemp nett, 8*s.* 4*d.*; 5 hesps of yearn and 2 cocknetta, 3*s.* 4*d.*
- 1602.—An old boat, 16*s.*; 9 lang kettles, 2 flwes and a flw net, a wyd net, and a skar, 2*l.*
- 1603.—A keele called the William, 18*l.*
- 1609.—Lynes and a net haule, 3*s.* 4*d.*
- 1610.—One snype nett with staves, 2*s.* 6*d.*; 2 syinge netta, 8*s.* 4*d.*; a shore nett and one cerupper, 4*s.*; a bote, 6*l.*
- 1612.—A third of a keele and boat, with ankers and takling, 18*l.*; a third of a boat called a Scould, with takling, 6*l.* 13*s.* 4*d.*; 2 shove nets and a kemping net, 5*s.*; a pr. of scales, certain ropes, and 7 stone weight of lead, 10*s.*
- 1618.—A boat, 2*l.*; a new nett, 13*s.* 4*d.*; an old boot, 7 netta, and 7 fishinge matta, with timber belonging to the rounes, 8*l.*
- 1625.—An old boat with certain handlings and a saile, 7*s.*
- 1629.—A scoule and 2 little boats, 8*l.*
- 1640.—2 boats and furniture, 20*l.* a leade for backinge of netta, 1*l.* certain netta, 3*l.*; certain fish and apples, 13*s.* 4*d.*
- 1645.—Goole.—A kele called the Mayflore,* 20*l.*; half of another keele called the Darnell, 10*l.*
- 1661.—The ferry boat at Whitgift, 12*l.*
- 1663.—One boat or skould called Elizabeth, with her takes, ankers, and rigin as shee now is used, with her cog boat, 22*l.*; a catch or boat, 30*l.*
- 1667.—The ferry boat of Rawcliffe and a little market boat, 5*l.*; 2 boats, 2 planks, oars, hooks, &c., 8*l.* 10*s.*; a great ferrie boat and the lease of half Ousefleet ferrie, 14*l.*
- 1681.—2 ferry boats with all things belonging† (Carleton), 14*l.*
- 1684.—A boat, 3 netta, and other furni-

nem salmonum vocat * * in contemptum Dni et contra statut, &c." he is fined 20*s.* Court Rolls.

In the Municipal Records of the Corporation of York in 1478, published by Mr. Davies, pp. 81—91), will be found a full and interesting account of this fish-garth, and many letters which passed on the subject; and a reference to Cal. of Plead. of D. C. of Lancaster, (I., 223; II., 297; III., 99.)

XXXI. Henry VIII.—Amongst the possessions of Selby the Commissioners mention—"Itm, the tythe salmond of Goldell Garth, late in th'ands of the howse, and ys worthe by yere ijs."

In a Survey of the Manor, made seemingly in 1566, it is said—"The farmers of the fishinge of Goldall garthe holdeth at will certain grounds of Eyrbancke within the Lordshippe of Gowdall, for easments of their windowes, lodge, and netta, and rente by yeare, two shillings." German Stapleton was lessee in Ed. VI. and Elizabeth. Richard Bayte seems to have been a partner at the time of his death in 1589; and Robert Read of Goole, in 1593. This last had goods at "Wormelay Hill within the pshe of ffishelake."

* Dionis Waterhouse of Rawcliffe, gives by Will, dated October 18, 1683, to John Patricks the third part of a boat called the May Flower.

† The Ferries of Carleton and Rawcliffe formed part of the profits of the Manor. Oswald Ricard of Cowick (Inv. August 26, 1610) has "a lease granted by the Duchie Court of Lancaster of the passage of Carleton Ferry, perquisites of the Court of Snaith, with other things granted to the said Oswald," valued at 40*l.* Matthew Lambe was fined, October 8, 1612, 10 Jac., for overcharging those "transauntes aquam apud Carleton Ferry," and for not conveying Thomas Jowland across the said water in due time.

An order was made August, 1636, respecting the number of boats which "the Farmer of the Queene's ferry" should keep to ferry the "passengers over in due and convenient tyme." The yearly value is returned in 1658 at 3*l.* 6*s.* 8*d.*

- ture belonging to the fishing at Redness, 8*l*.
- 1687.—For saile cloth, 19*s*.; a sighninge nett, a shoove net, 2 stand nets, 3*l*. 10*s*.
- 1692.—A keele, 16*l*.; a keele, 60*l*.; a vessel, 30*l*.
- 1694.—*Rowdiffe*.—A keel called Prosperous and a cogg boat, and the third part of another keel, 22*l*.
- 1700.—A keel, a cog boat, mast, and saile, 50*l*.; the eighth part of a ship at York, 15*l*.
- 1718.—3 ferry boats and furniture, 30*l*.; the lease of Carleton ferry, 10*l*.

(3.) LINEN, HARDEN, FEMBLE, and other CLOTH.

- 1568.—2 yds. of denshyer kersaye, a yeard of brod cloth, 12*s*. 4*d*.; 22 yds. of linen, 18*s*. 4*d*.; 12 yards of femble cloth, 4*s*.
- 1569.—17 yds. of lynne cloth, 17*s*.; 5 yds. of femble and harden, 2*s*.
- 1580.—16 yds. of femble, 8*s*.; 26 yds. of harden, 6*s*. 8*d*.; 36 yds. of linnen, 1*l*. 17*s*.; 11 yds. of linnen strikes, 5*s*.; 13 yds of lyn strikina, 5*s*.; 11 yds. of lynne hards, 5*s*. 6*d*.
- 1581.—16 yds. of twill and 2 table clothes, 1*l*. 5*s*. 4*d*.; 9 pair of lyne sheets, 4*l*. 10*s*.; 20 yds. of lynning, 1*l*.; 10 pair of hemp teare sheets, 2*l*.; 4 pair of harden sheets, 8*s*.; 12 yards of cloth, 6*s*.; 12 table napkyns of lyne, 10*s*.; 18 napkyns of lyne, 8*s*.; 18 table napkyns of femyll, 6*s*.
- 1582.—8 yards of hemp teare, 4*s*.; 3 pieces of woollen cloth, 17*s*. 4*d*.; 16 yards of line cloth, 8*s*.; 2 wynding clothes, 3 secks, 4*s*.
- 1585.—20 yards of harden cloth, 6*s*. 8*d*.; 11 yards of new femble cloth, 1*l*. 11*s*.; 9½ yards of linen cloth, 10*s*.
- 1588.—8 yards of linen, 8*s*.; 6 yards of red carsey and 5 yards of black puke, 1*l*. 2*s*.; 5 yards of ashe colethwed cloth, 5 yards of graye, 13*s*.; 5 yards of white carsey, and 5 yards of white cloth, 12*s*. 8*d*.; 30 yards of seccoon, 9*s*.
- 1606.—3 yards of russet, 5*s*.; 3 yards of karsey, 6*s*.; 8 yards of cloth for blankets, 10*s*.
- 1608.—6 yards of fosyen, 7*s*.; 24 yards of Manchester seccoon, 16*s*.; 16 yards of seccoon, 7*s*.; 10 yards of white seck cloth, 5*s*.; 8 yards of Manchester twill, 4*s*.; 5 yards of genes, 3*s*. 4*d*.; 10 yards tuse fussian, 10*s*.; 20 yards of buckrum, 9*s*.; 10 yards of buffyn, 10*s*. 6*d*.; 6 pair of whit knytt stokyns 9*s*.; 2 pair of children stokyns, 1*s*.; 7 yards of corse lyne, 5*s*. 4*d*.; 9½ yards of huswife line, 9*s*. 6*d*.; 4 yards of Skoch lyne, 7*s*. 6*d*.; 2 ends of corse lawne, 6*s*.
- 1615.—5½ yards of carsey, 14*s*.; 100 yards femble cloth, 5*l*.; 50 yards of lyn strikina, 1*l*. 13*s*. 4*d*.
- 1638.—16 yards of line cloth, 15 yards of femble, 10 yards of line hardes and bedticke, 14 yards of harden, 2*l*. 12*s*.; 20 yards of harden at weaver, 10*s*.
- 1641.—14 yards of femble cloth, 12*s*.; 8 yards of linen, 6*s*. 8*d*.; 20 yards of harden, 10*s*.; 5 linen sheets, 1*l*.; 7 linen pillow bears, 8*s*.; 2 femble sheets and a line hard sheet, 10*s*.; 3 linen towels, 4*s*.; 6 lin curtains and a vallance, 12*s*.; 2 pairs of harden sheets, 2 coarse table cloths, 8*s*.; 3 score of unwrought sacks, 1*l*.
- 1644.—9 yards of coarse blanket cloath, 6*s*.; 8 yards of cloth, 16*s*.; in the shop in Manchester wayre, 2*l*.; a twilt, 5*s*.; a yellow rug and a covering 13*s*.; a linse woolse carpet, 2*s*.
- 1701.—16 yards of hugaback, 10*s*.; 8 yards of harden cloth, 5*s*.; 18 yards wolsey, 13*s*.; 9 yards of tickin, 9*s*.; 10 sackes, 10*s*.
- 1708.—¼ yard of flannel, 1*s*.; 1 yard of Scotch cloth and making, 1*s*. 7*d*.; ½ yard of dammaske, 6*d*.

(4.) VARIOUS ARTICLES.

1568.—Thomas Estoft* of Redness.—His best gowne, his best dublitt, his cappe, 2*l.* 6*s.* 8*d.*; 2 payer of hose, a frasse gowne, a frasse cote, a dublitt, and one payer of clasppa, 16*s.*; a payer of cobierons in the parlar and a felt hatt, 4*s.* 8*d.*; 4 silver spoones, 1*l.* 2*s.*; a stroke of mustard seed and 2 pecks of hempseed, 2*s.* 4*d.*

1569.—8 brasse potts, 10*s.*; 5 silver spoynes, 1*l.*; a bowe and arrowes, a jack, and a byll, 6*s.* 8*d.*; a stone of tallow, 2*s.*

1575.—Thomas Meatham of Carleton.† —The leas of the ferry, 3*l.*; his dagere and swoorde, 4*s.*; 2 jackets, 6*s.* 8*d.*; an old cloke, 2*s.*; a hatte, 1*s.* 4*d.*; 2 fether beddes, 2 bolsters, and 2 pillowes, 1*l.*; 6 pillow beares, 4*s.*; 3 olde bedd stoopes, 1*s.*; 4 brass pottes and 1 ierrone potte, 10*s.*

1576.—A silver girdle, 16*s.* 4*d.*; to my mayd† for wages this yeare, 4*s.* 9*d.*

1577.—A pair of bootes, 5*s.*

1578.—Richard Flower of Armain, and Donnington (Co. Linc. ?). —One Englysh bible, 5*s.*; 2 silver arrowes, 2*s.*; silver jewels which containe corralles, 2*l.* 10*s.*; a tablett of gold, 2*l.*; 9 gold ringes with other stones,

2*l.*; 2 dosen damask napkins, 2*l.*; 5 napkins fringed with gold, 1*l.*; 6 old pieces of velvett, 3*s.* 4*d.*; the hay and edishe of the close, 1*l.* 13*s.* 4*d.*

1580.—A pair of playing tables, 1*s.*; half a barrel of pitch, 4*s.*; 2 silver salts and 2 dozen silver spownes, 8*l.*; in the wynde mill a gavelock and sale clothes, with pickes and other implements, 13*s.* 4*d.*; a barrall of pitch, 8*s.*; 3 bushels of mustard seed and a cheese hack, 12*s.*; 3 petticoats, two dubble kyrochers of line, two single kyrochers of line, 2 dubble railles and one single, 2 reconclers of line, other 2 of a worse sorte, 2 line appurnes, 2 femble, a pare of lustciurn slevis and a pare of seckclothe, 3 smockes, 3 qrs. of harden clothe, a pare of hose, and a pare of shoune, a hat, a muffeler, a gyrdell, a purse, and a pare of knyves, 20*s.*

1581.—A silver goblett parcell gilt, 4*l.*; 1 dozen sylver spones, 4*l.*; 24 sawsers and podyngers, 10*s.*; 2 pestilles, 2 brasse morters, 14 brasse potts, 4*l.* 10*s.*

1582.—10 chargers of pewthere, 15*s.*; a sword and dagger, 5*s.*; a lute with

* Of this ancient family, Walter Estoft made his Will at Eastoft, December 14, 1458, and it was proved April 27, 1461, naming his brother William, his wife Matilda, and his son and heir a minor.

In 1438-9, Feb. 17, a Robert Estoft of Bawtry made his Will, naming his wife Joan, and his daughter Margaret living in York.

John Estoft of Redness, in his Will made on Sunday after the Feast of Pentecost, proved August 12, 1455, names his wife Joan and son William.

Thomas Estoft of Redness, in his Will made December 20, 1540, names his son Edward, his cousin Thomas Saltmarsh, William and Edmund Estoft.

Edmund Estoft of Redness, gent., made his Will August 12, 1557. The above are at York: the following at Snaith.

Isabella Eastoft, widow, administered to her husband Robert Eastoft of Ousefleet, deceased, February 19, 1597-8, to the use of John his son.

William Eastoft of Potter Closes, gent., December, 1612, names his sons William and Thomas, his wife Ann, and daughter Jane, and desires to be buried at Hooke: his Will was proved October 20, 1613, to the use of William, Christopher, Mary, Abdia, and Ann Estoft, his children. Inv. 50*l.*

† Notices on the subject of wearing apparel, will be found under the years, 1580, 1593, 1601, 1687, 1700.

In 1553, January 8, Henry Egremond claims of Robert Cossen and Elizabeth his wife "a toge, 10*s.*; a violet kirtle, 4*s.* 4*d.*; a bonett, 3*s.* 4*d.*; a briche par, 2*s.*; half a yere's wage, 6*s.* 8*d.* Sum 1*l.* 6*s.* 8*d.*" Snaith Court Roll.

In 1696, April 18, Duke Gowland of Selby owns 3 coats at 1*l.* 5*s.*; 3 waste coats, 14*s.*; 3 pair of breeches, 12*s.*

- other instruments, 5s.; 8 loaves of bread, 6d.
- 1583.—5 pair of Webster lomes with all the tooles belonging, 1l. 2s.; in eggs, 6d.
- 1584.—A barrell of beare, 8s. 6d.; a teldo, a paire of shets, and 2 sythes, 2s.; a cotte of plaite, 13s. 4d.; a pare of playing tables, 2s.; his lome with all the gear, 1l.; a gryndle stone, 4s.
- 1585.—2 qrs. salt, 16s.; 1 qr. salt, 6s.; a kinnell, a fish kitt, a water kitt, 2 stands, 2 old bowles, 5s. 8d.; 10 silver spoons, 3l.; a silver whystill, 5s.; in sepe and vinioker, 4s.; one byble and prayer bouk, 8s.; 2 payre of yron bound wheles, 3 wayne ratthes, 5l.; a ry mough, 20l.; 1 lb. of candles, 4d.
- 1586.—One ambrey, 14 pece of pewter, 5 candlestickes, and one latyn chawf-fyn dishe, 18s. 4d.; 1 cote of plaite, 13s. 4d.; a pare of virginalls, 1l. 9s.; 2 silver spoones, one sylver malte, one sylvere bowle, a percell gilte sylver cup with a cover percell gilte, 4l. 13s. 4d.; a shirt and 2 bandes, 3s. 4d.; a blacke sylke woman's hatt, and 2 caps, 5s.; a bed teaster with curtaines of red and greene saye, 10s.; 8 borda, a swine trough, 2 beast houses, and a hecke, 1s. 4d.
- 1587.—7 silver spoons, 1l. 15s.; 2 pairs of pot gryppes *, a gallon of aile, 4d.; for jest of one oow, 1s. 8d.; onyons and apples, 10s.; a barrell of beare, 5s. 4d.; in the new laith one bay of barley, 6l. 13s. 4d.; a baystead of skegg, haver, and beana, 2l.
- 1588.—5 lb. of whyt and red lead, 1s. 6d.; 4 glasses, 3s.; 3 Accedensae, 9d.; $\frac{1}{4}$ lb. of sinomon, 4s.; 1 lb. of starche, 5d.; 2 tallow cakes, 4s.; 2 stone of tallow, 6s.; a barrell of tar, 8s.; $1\frac{1}{4}$ lb. of candles, 9d.; $\frac{1}{4}$ cwt. of iron, 6s. 8d.; 1 cwt. 1 qr. of curruns, 2l. 16s.; 1 qr. of great raisens, 6s.; 1 cwt. 1 qr. of prunes, 1l. 5s.; 1 lb. of roche allom, 4d.; 1 lb. of gome, 1s.; 5 lb. of gaules, 3s. 4d.; 2 lb. of granes, 1s. 6d.; 1 dozen and 10 lb. of peper, 3l. 17s.;
- 9 lb. of anyseda, 4s. 8d.; 1 qr. of wormseed, 20d.; $\frac{1}{4}$ lb. of byskytt, 8d.; 3 lb. of gunpowder, 9s.; $1\frac{1}{4}$ onse of saffron, 2s. 3d.; 3 lb. of armyke and rosager, 10d.; 10 lb. of suger, 15s.; $1\frac{1}{4}$ lb. of nutmuges, 9s.; 1 lb. of mace, 9s. 6d.; 4 lb. of almondes, 2s. 6d.; 1 lb. of Indayne almondes, 18d.; 2 lb. of ginger, 2s. 4d.; 1 lb. of tarmarake, 1s. 4d.; qr. lb. of cloves, 1s. 6d.; 1 lb. of synomon comfytta, 1s. 6d.; $\frac{1}{4}$ lb. of collyanders, 8d.; 1 lb. of red waxe, 6d.; $\frac{1}{4}$ a reame of browne paper, 1s. 6d.; 10 skynes of perohment, 2s. 6d.; $\frac{1}{4}$ grosse of trenchers, 12d.; a sword, 8s. 4d.; 10 silver spoones, 3l. 10s.; a cloke, 10s.; a pair of hose, 2s. 6d.; a girkyne, 6s. 8d.; a doblett, 10s.; 2 syke hatts and 2 cappes, 6s. 8d.; a pair of tenters, 4s.; a pair of sheares, 5s.; 2 hides, a saddle and bridle, 6s. 8d.; carriage of a kylderkyn of beare from Hull, 2s. 6d.; cattle in the great meanes and lower meanes, &c.
- 1589.—A coralett, a pycke, and a sword, 2l.; 12 silver spoones, 2l. 8s.; one pare of dysinge tables, 2s.; two cheests and a red saye, 2s. 6d.; 200 eggs, 4 lb. of candles, 4 mattresses, 4 twilts, 4 telds, 30 sacks, 3 coverings, and 3 coverlets, 14l. 8s.; 2 looms and gear, 10s.; 7 great chargers, 13s. 4d.; a cotte of platte, a sallet, a halbert, a byll, sworde, and dager, 1l. 6s. 8d.; 2 ayne forkes and 2 muckeforkes, 2s.; 2 wood axes, a byll, a hatchett, a breare hake, 3s. 4d.; 2 great swales with stores, 2s.; the fourth part of a signe, 4s.
- 1590.—2 cobyrons, 1s. 4d.; a gavellyn stafe and a quiver with the arrows, 6d.; one hallyn with all the painted clothes and one trellisse, 5s.; a bow, a brazer, and 6 spiks, 4d.; 2 hammers, 2 cold locks, and graned staffe, 8d.; one dagger with a sheare, 6d.; one old sword bladd, 4d.; 4 dunks, trenches, and certeine till stones, 1s.; for carriage of 18 couple of salt fish, a bundell of lyne, and a peice of a madder poke of Jugges, 4s.; a pair of boots, 3s.; 2 winding sheets, 6s.; claspes and keepers, nutmeggs and

grind licoras, 1s.; one sworde and a steel cap, 3s. 4d.; 29 dozen white points and 10 keyknopes, 4s.; 3 lb. of curantts and certen ginger, 1s. 8d.; 6 rye loaves, 8s.; 1 qr. of salt, 16s.; 4 lb. of tayley candles, 1s. 4d.; 31 lb. of candles, 10s.; 3 stone of tallow, 10s.; a bow and 6 arrowes, 8s.; leases and takes, 3l.; 1 stone of swine's grease, 3s.

1591.—6 pecks of salt, 2s.; 2 days' work of thatch, 8s.; an old potage pot with kilpes, 2s.; a hatchett and a frying pan, with other implements in the Spence, 7s.; a bow and 14 arrowes, 10s.

1592.—A gunne, 1l.; 3 rings of gould, 1l. 6s. 8d.; a brush and a dyall, 10d.; a case of counters, 8d.; a silver sponse, 6s.; a dagge, 5s.; a skel dagger, 2s. 6d.; a stand bed, a feather bedd, a teild, a happing and painted cloth, 1l.; his purse and rebarrill, 19s. 4d.; one day's work thatching, 2s.; rent for one cow, 5s.; a mare's skin, 1s. 4d.; 1 fott of beffe, 2s. 10d.; 15 dozen of calf leather, 3l. 15s.; 8 dozen of leather in the pits, 1l. 16s.

1593.—12 dores, lockes, and keyes, and 3 glasse windowes, 1l.; 24 foote of glasse, 6s. 8d.; a gold ring, 8s.; a partall towards the kythinge and a glasse case, 10s.; 6 pair of samrane sheets, 14s.; 3 neckcheves, 4 crosseclothes, and 2 coyves, 13s. 4d.; 2 crossebowes and arrowes in a quiver for a long bowe, 10s.; 2 longe bowes, a woode kniffe, a flaske, and a hand sawe, 3s. 4d.; 3 staves, a black bille, and a buckler, 1s. 8d.; 2 bread graters, 6d.; 2 silke hatts for women, 3s. 4d.; a pare of playinge tables, with men belonginge to them, 2s. 4d.; 2 firkyms of sope, 1l. 7s.; 12 dozen candles and some tallow, 2l. 2s. Christopher Lawrence, gent.* of Snaith, a mylk and watter cloake, 2s. 8d.; 3 car-

pynes, 2s. 6d.; 2 pare of blanketts, 3s. 4d.; one pare of blacke French hosse, 1s. 8d.; one blacke cloke layd with blacke silk butttons, 6s.; a fushion dublet, coler of maydenshaire, and a pare of hosse, 10s.; a pare of stockens, coler of mayden haire, 2s.; 3 yds. of grene cloth, 1l.; 2 old iorter, yelowe, 6d.; one sheart, 2 rufe bann, and 6 fauling bands, 8s. 10d.; 2 handkercheifes, and 1 paire of wrought coufees, 8d.; a black hatt with bande, and a scarfe, 1s. 10d.; a sword, a dagger, a paire of boots, a paire of spurs, and a paire of showes, 7s.; 3 printed bookes, a paire of tables, 2 silver spones, 2 dussin of silver butttons, and a velvett girdle, 13s. 4d.

1595.—A harrow tугge and a salting kymlett, 5s.; a riplinge combe, 3 looke crookes, 3 segge coddess, kye sailles, a canne, 2 old tubbes, a lantern, and a haye raick, 2s. 6d.; 9 gallons of milk, 13d.; his winding sheet, 1s. 4d.; the lease of Carleton ferry, 3l.; 4 three grayne forks and 3 other forkes and dragges, 2s. 8d.; 10 skeeles, 1s. 3d.; 2 horse cutt widdies, 6d.

1596.—All the hallyngs, 4s.; 6 stirk leather hydes and 2 horse hides in tanning, 1l. 3s. 4d.; a stone of tallow and grease, 4s.; a glass case and haggabushe croke, 12s.

1597.—For carriage of two hogsheeds of vinegar to Wakefield, 12s.; 4 llb candles and 2 dozen eggs, 2s. 4d.

1598.—A camappe bed, —; 8 payre of Sameran and harden sheets, 1l. 4s.

1599.—3 dosen dresst lethers, 7 pair of gloves, 10s.; 7 dozen of weete lether, 10s.

1601.—A litle drynking cuppe bounde with sylver, 2s. 6d.; 3 silver rings and 1 paire of hookes, 2s. 6d.; one caliver, 2 swordes and 2 daggers, 13s. 4d.; a bread grater, 4d.; a coat of plait and a halberd, 10s.; a cow-

* William Balthrope is an appraiser, and Henry Lawrence, of Stanway, in Com. Essex, gent.; Thomas Allan, of Braton, in Com. Ebor, gent.; and Robert Skafe, of Selby, draper, give bond July 28. Deceased owed Peter Vavasour, 1l., John Acklome, 5s., Francis Farfax, 1l. 10s. 8d., John Acklom, Esquier, 1l. Francis Palmes owed him by byll 8l. 6s. 8d., yong Mr. Vavasor, of Hesalewood, 13s. 4d., William Vavasor, son of Leonard Vavasor, 10s.

- skin, 5 sheepskins, and other morts, 6s. 8d.; 6 pecks of salt, 2s.—3s.; leases and tacks, 8l.; John Moore of Armin; his apparell, being 3 pair of britches, 3 pare of stockings, 3 dobletta, 3 jerkins, 2 paire of buses, and 2 cloakes, 3l.
- 1602.—A silver toothpick, 12d.; a halberd, 12d.; one pair of coblerons, 5s.; a tynne bottle and 12 tynne spones, 2s. 6d.; 3 sheepskins, 3s.; a stott skin, 2s. 8d.; 18 lb. of candles, 4s. 6d.
- 1603.—Books, 4l.; a sword, a brush, and 3 glasses, 5s.; a tanned hide, 1s. 8d.
- 1604.—One Flaunders counter, 10s.; an arke full of apples and other hualament, 1l.; the elding, and a portion of fethers, 14s.
- 1605.—An old sword and a wode knife, 3s.; 3 iron forkes, 2 dungforkes, a forrest bill, a tragge, a bryerhook, 3s. 4d.; 11 quishons, 2 cradles, a cradle cloth, 10s.; a sword and a wued, 6s. 8d.
- 1607.—A Bible, Psalter, and other bookes, 1l. 10s.; a sword and dagger, 6s. 8d.; a flax, a tuch box, bandeleres, and gun, 3s. 4d.; a plate coate and cappe, 1l.; a pair of cobirons and other iron geare, 13s. 4d.
- 1608.—3 stone of new iron, 6s.; 42 lb. of iron, 5s.; the vise and stethie, 1l. 13s. 4d.
- 1609.—2 lb. of hair, a pestell, 2s. 6d.; 34 lynns of onyns, 5s. 8d.; the mappes with other pictures in the great chamber, 1l.; his bookes, a deak, and standiges, 1l. 10s.; a silver boolle, and 4 silver spoones, 2l.
- 1610.—A corselet and a pike, 2l. 6s. 8d.; a pytall and one dubble case to yt, 3s.; a sword and dagger, 2s. 6d.; 8 silver spounes, 2l.; books in the study, 2l. 13s. 4d.; one finster or safe, 8l.; the sellinge in the seiled parler, 1l. 10s.; one truncke, one stoole of ease, one coffer, a warming panne, and a payre of tonges, 10s.; 2 ewe bowes, 2s.; hay in two baysteades, 4l.; a lease of Carleton ferry, 40l.
- 1611.—One acavits bottell and one flackitt, 6d.; 2 towels and 2 peliners, 1s. 8d.; one armour, a sword, and pike, 1l. 6s. 8d.; 20 sacks, 7s.; a score of oxw bowes, 1s. 8d.
- 1612.—4 greatest brassmettle pannes, 1l. 6s. 8d.; 6 saile pottes, 2s.; a shredding knife, 2 chopping knives, a slyse, 2 broyle irons, a tost prick, one iron pestell, and a basting ladell, 5s.; 1½ stone of fethers, 6s. 8d.; a sword, dagger, and rapier, 13s. 4d.; the flesh of half a stott and a calf, 13s. 4d.; a flanel cradle cloth, 1l.; a sylke pillow, other old sylke and a gold lase, 16s.; glasse in the windowes, 3s. 4d.; a paire of playing tables, 2 benches, 3 cushions, 9s.
- 1613.—One fowling piece and one dagger, 10s.; 4 couple of lings, 5s. 4d.; a sword, 2s.; a vergis barrell and 4 cheese fatts, 16d.; a peck of salt, 4d.
- 1614.—One hallen and a binck trellis, 2s. 8d.; sope and starch, 2s.; pepper with other spices, 5s.; 8 silver spoones, 10s.; hoppes of lyne, 12d.; certain salt fish, 14s.
- 1615.—5 hives, 2s.; 3 lb. feathers, 1s.
- 1616.—Half a dozen pille hemp to be paid betwixt Candlemas and Ffastins;* 8 lb. candles, 4s.; 5 pecks of salt, 1s. 8d.; one weiging bauck with skailles, 12d.; lairde at the bauckes, 5s.; 3 butcher bills, one clever, one whetstone, one stone of lead, 7s.; 3 maunds, 18d.; 2 saddles and 2 swords, 10s.; 6 poddengers, 3s.; 5 silver spoones and 1 gilted part

* This is still the vulgar name at Snaith for Ash Wednesday; Shrove Tuesday being called Fastins Tuesday, and the other days of the week being distinguished by this expressive prefix. It forms a great landmark in the calendar of those in humble life, who, Quaker-like, ignore the existence of the months of the year; but unlike them, reckon by the Fasts and Festivals of the Church of England. An instance of this mode of computation occurs in the By-law Book of Withernwick in the County of York, October 17, 1744, when the Jury agree that all the owners of cattle now in the field "shall tack them out on the 18th day, which is properly cold Sent Luck."

- of silver, 1*l*. 5*s*.; one gowne of Durams in gage, 1*l*. 4*s*.
- 1617.—3 cuthwithes and a tugg, 1*s*.; an citisale milne, 5*l*lb. of harden yarne, 5*s*.
- 1618.—A bridle and a croper, 6*d*.; a pair of hose made of French fashion, and one codd, 2*s*.; a blew cote and a jerkin, 5*s*. 6*d*.; a halberd, a spittle, forkes, and other staffes, 6*s*. 8*d*.; eow somerage, 6*s*. 8*d*.; a weavin loome and gears, 1*l*. 10*s*.
- 1619.—A base violl, 3*s*.; a sword with hangers, 2*s*.; a coralit with furniture to yt, 8*s*.; a dublit and britches, 15*s*.
- 1620.—A spit and a friggom, 1*s*.
- 1623.—2 cream potts, 4*d*.; 2½ fests of glasse, 10*d*.; a silver spoone, 4*s*.; a Gould ringe, 2 silvar ringes, 2 claspes, and keepers of silvar, 13*s*. 2*d*.; a Flandrese chest, 15*s*.
- 1624.—2 paire of blanketts, 1*l*. 6*s*. 8*d*.; 2 twilts, 1*l*.; 2 cradle cloaths and a pillion cloath, 13*s*. 4*d*.; 5 latten candlesticks, 3 chafen dishes and a basin, 12*s*.; 2 silver spoons, a silver whistle, with other small jewells of silver, 13*s*. 4*d*.
- 1625.—A saddle, 1*l*.; a pair of boots and 3 pair of shoes, 6*s*. 8*d*.; 2 cheslop bages and a matchell, 6*d*.; picters and mappes, with a seinge glasse, 14*s*.; a watch and a golde seale, 3*l*. 10*s*.; a silver boule, and 14 silver spoones, 5*l*.; a haver reddell, a ringe sieve, and 2 scottles, 8*d*.
- 1626.—One book of Marters, 1*l*.; 2 gold rings, 10*s*.; 3 silver spoones, 1*l*.; a muskett, 1*l*.; a fowling piece and a girdle, 12*s*.; a little burding peece, 3*s*.; 2 latten chaffing dishes, 3*s*.; a stone of feathers, a burdnett, a baskitt, and a cheese heck, 10*s*.
- 1627.—2 mappes and bookes, 2*s*. 8*d*.; 8 loaves of brown bread, 1*s*. 2*d*.; 30½*l*lb. of brass, 15*s*.; 62*l*lb. of iron, 10*s*. 4*d*.
- 1628.—A balse and a tribble, 1*l*. 7*s*.; all the hallins or painted clothes, 6*s*. 8*d*.; cloath, famble, and sloppins, 1*l*. 4*s*.;
- a wante, 3 surringles, and girthweb, 2*s*.; a pair of lowmes, 13*s*. 4*d*.; a pair of tenters, 13*s*.; 2 pairs of walker sheeres, a sheer board and tassels, 13*s*. 4*d*.; 3 pairs of traces and 2 cuthwithes, a pair of mauls, and 2 pairs of shakles, 4*s*. 6*d*.; one stand-bed with bedding, 8*l*.; 10 sett worke quashinges, 2 skreens, 2 handskreens, an iron rainge, one sple iron, and a testing iron, 2*l*.; one duble gilt salt, 2 gilt bowles, and 8 silver spoones, 13*l*. 6*s*. 8*d*.
- 1629.—Two Cronicles and 4 other little bookes, 3*s*. 4*d*.; one Englishe Bible, 6*s*. 8*d*.; 13*l*lb. candles, 4*s*. 4*d*.; a vargis brake and a elense, 5*s*. 10*d*.; certaine white elaret and secke, 13*l*. 10*s*.; a fooling piece, 10*s*.; 2 recorders and 2 daggers, 2*s*. 6*d*.; a saddle, a pillyon-seat, a moulbord, and a squorrell ruge, 16*s*.; a mett of salt, 4*s*.
- 1630.—A crosse bowe and a rake with arrowes, 5*s*.; 3 spits, 2 lampran spits, pans, &c., 13*s*. 4*d*.; 2 silver boules, 6 silver spones, and one Masard dish, 7*l*.; certain staves and a spittle staffe, 1*s*.; one Jeron bune waine, 2*l*. 10*s*.; 1 dosen lamb skina, 4 rabbit skina, and 2 fowmert skina, 1*s*.; 2 earning bagges, 2*s*. 6*d*.; a flesh axe, 6*d*.; a battell axe, 1*s*.; a halbard, 3*s*. 4*d*.; a fooling piece, 5*s*.; a strike skepp, a two-peck skepp, a peck skepp, a creele, 5 riddles and scuttles, and one leppe, 10*s*.; a mett of apples,* and a pair of muster quearnes, 2*s*.
- 1631.—5 silver spoones, a dosen tin spoones, a pewter basin, and 2 aleuny spoones, 1*l*. 2*s*.
- 1632.—One savegard, 2*s*.; 7 scythes, 6*s*.
- 1634.—A stake sheeres and pinkinge irons, 6*d*.
- 1636.—Pullanarie, 1*s*.; a lowme, a warping fatt, and a wheel, 8*s*.; 10 score of unwrought secke webb, 1*l*. 10*s*.; 14 score of wrought secke webb, 5*l*. 12*s*.
- 1637.—A Bible, 10*s*.; 7 bookes and a Bible, 13*s*. 4*d*.; wallnutts, 9*s*.; a corslet, 6*s*. 8*d*.; a mortar and pestell, 13*s*. 4*d*.; a halberd, 2*s*.; 6 dosen scythes,

* In 1282 the balliff of Cowicke, in the county of York, stated in his accounts that he had made 60 gallons of cider from 8¼ quarters of apples.—Hudson Turner's Domestic Architecture. Note on page, 139. [G. O.]

- 6l. 12s.; certain linen clothes and smokes, and a bushen waste coate, 10s.
- 1638.—A silver spoone, 8 ringes, a silver thimble, 13s. 4d.; 1 doz. pewther spoones, 1s. 6d.; some bookes, one called a Testament, 2s.; 2 winding clothes, 3 Venice glasses, a looking glass and a smoothing yron, 3s. 8d.; 9 silver spoones, a silver whistle, with other silver, 2l. 6s. 8d.; a gold ring, 10s.; gallow balke, hookes and crookes, knogges and spelles, and a lanthorne, 10s.
- 1639.—4 barrels and 2 wood bottels, 10s.; 8 silver spoones, 12s.
- 1640.—A base viall, 10s.; licoras planted, 3l.; all the sheeking tooles with the budgett, 1s. 6d.; a stone of short haire, 4 lb. of long haire, 3 lb. of powder, 2 silver spoones, a sickle, and a smoothing iron, 13s. 4d.
- 1641.—A battle dore, 2 rolling pins, and 2 whele spindles, 6s.; a brass candlestick, a half candlestick, a pair of pewter colfings, and a pair of peper whearnes, 12d.; 4 lethers, one fit for stainings, 5s.; all betiffe and putther, 2l.; 5 paire of shoes and a paire of slippers, 12s.
- 1642.—A little posnet that's pawned, 6d.
- 1644.—4 lb. of pepper, 8s.; a met of salt, 4s.; prunes, 1s. 4d.; 2 little cags, 1s. 6d.; 6 couple of lings, 1l. 4s.; to the nailer of Haldenby, 12s.; 3 broad pieces of leather, 5s.; a paire of Spanish blanketts, 16s.; a brown rugg, 1l. 10s.; 4 green quishens, 3s. 4d.; 2 bibles, 10s.; a statute book, 4s.; an apple chest, 8s.; a glass case, 15s. *John Dawney, of Cowick and Selby, gent.*, his purse and apparel, viz.: one velvet coat, and a dowseu and a halfe of silver claspees, one mixt colored cloath sute and cloake, another old frise sute and coate, another cloeth coat with the rest of his clothes, 7l.; 2 gold rings and one watch, 3l. 6s. 8d.; a looking glass and a picture, 4s.; 3 old silver spoones and a wrought cup, 15s.
- 1645.—8 new linsay woolsey cushions, 6s.
- 1646.—A cradle, 2s.; 6 secks, a wind-cloth, 10s.; 9 paire of children's shoes, 10s.
- 1647.—3 score yds. of new cloth and the napry ware, 5l.; 5 lb. of line, and $\frac{1}{2}$ stone of feathers, 5s.; for oureinge a horse of the scab, 3s.; 31 pewther platters, 2l. 1s. 4d.; 5 small brass pannes, 6s.; a dubble braisen cawthron, 9s.; 2 paire of turfe netts, a lantran, a turfe spaide, and a sweth, 6s. 8d.; 2 frying pans, a Locke, 2 riggbandes, and a sack full of fethers, 5s. 6d.
- 1648.—One chese cratch, 8s.; $1\frac{1}{2}$ qr. of apples and pears, 16s.
- 1652.—A cow hide, 1s.
- 1654.—Half a tun of iron, 6l.; $\frac{3}{4}$ cwt. of allum, 1l. 4s.; $1\frac{1}{2}$ lb. of indigoe, 7s. 6d.; 6 lb. of galles, 8s.; 2 barrels of pitch, and 14 lb. of rosill, 18s.; 4 lb. of bees wax, 3s. 4d.; $\frac{1}{2}$ lb. of mithridate, 6s.; 10 lb. of pepper, 10s.; 4 lb. of mace, and 2 lb. of cloves, 6s. 5d.; 16 lb. of sope, 3s.; 2 cwt. of corrunnes, 4l.; a cwt. of starch, 1l.; 2 cwt. of raysens, 17s.; 7 lb. of sugar, 7s. 8d.; 28 lb. of anyseeds, 18s.; 5 lb. of ginger, 5s.; 12 gallons of burdus veniger, 18s.; a gallon of strong water, 3s. 4d.; a runlit of sallit oyle, 6 gallons and a pt., 1l. 7s. 7d.; 2 cags of tobacco, 6l. 7s. 6d.; 7 lb. of hops, 6s. 5d.; 18 lb. of candles, 5s.; 1 lb. of nutmegs, 5s.; 8 gunes and a partridge net, 2l.; $1\frac{1}{2}$ realm of white paper, 10s.; a dozen grammers, 7s. 6d.; 5 accidences, 1s.
- 1659.—450 peltis, 16s.; a chine of poarke, 8d.; 6 threave of barley straw, 1s. 2d.; $\frac{1}{2}$ stone of feathers, 3s. 4d.
- 1660.—A pair of shoes, 2s.; 2 weeks hay for a horse, 4s.; for keeping 2 children 4 months, 3l.
- 1661.—A paire of cow hankes, 1s.; owing for a why gate, 10s.
- 1662.—A barrall of ale, 7s.; $7\frac{1}{2}$ stone of lead, 12s.; a fowling piece, 6s.
- 1663.—A barrall of beer, 12s.; a little firkin with sack in it, 2s.; a hoghead with white wine in it, 1l.; 3 horse-skins, a foal skin, a why hide, and a stirk leather, 1l. 8s.

1664.—3 paire of boots, and 12 pair of shoes, 2*l*.

1666.—A dozen of soape with starches and powther blew, 1*s*. 2*d*.

1667.—A halbert, 5*s*.; one raper and 2 tomickes, and in bookes, 2*l*.; a book called the Paraphrase of Scripture * —; a large Psalter, with 10 other Latin books, 10*s*.; 2 plover netta, 10*s*.; a cabinet, a silver caudle pot with a cover, —; 3 dozen white calf leather, 1*l*.; 2 dosen of furred, 13*s*. 4*d*.; 1 doz. calf leather, coloured, 9*s*.; 8 more of the same, 4*s*. 5*d*.; 2 doz. of green calf skins in the pit, 9*s*.; 1 doz. of women gloves, 4*s*. 6*d*.; 7 paire of men's gloves, and 4 paire of muffs, 4*s*. 2*d*.; 7 paire of fur gloves, 5*s*. 10*d*.

1668.*—A glass case, 6 Holland plates, and a glass plate, 5*s*. 6*d*.; 6 Holland pictures, 1*s*. 6*d*.; 3 pictures and a map, 1*s*. 4*d*.; a looking glass, and an hour glass, 1*s*.

1678.—Her aprie ware, 1*l*.; 10 looms in the backerend, 1*l*. 10*s*.; a lamparan spitte and racks, 1*s*. 4*d*.; a little soe chenkit, and 3 larger kits, 6*s*.

1679.—3 fowling pieces, 1*l*. 15*s*.; a womley and a stourrop, 6*d*.; 50 pieces of sacking, 22*l*. 10*s*.; the loom gear and warping fatt, 5*s*.; Carleton, a pair of bellows, the stithy, the vice, sleek trough, grindstone, all the coales, all the toules and other implements in the shop, 8*l*. 10*s*.; Cowick, 4 playnes in stocks, 2*s*.; 9 chisells, 3*s*.; 15 small chisells with a drifte and one fyle, 2*s*. 6*d*.; 9 wombles, 3 gimletta, 5 parrey bitts and one brase, 5*s*.; 3 adges, 3*s*.; 3 axes, 4*s*.; 2 narrow axes, 3*s*.; 2 latt axes and a hammer, 1*s*.; a whipp sawe, 2 quart sawes, and 2 hand sawes, 7*s*. 4*d*.; 2 iron gavelocks and 5 hook pins, 3*s*. 6*d*.; 9 weeks table and attendance at Goole not being able to put on his own clothes, 18*s*.

1680.—A tearse and 4 barrels full of ale, 3*l*. 6*s*. 8*d*.; in the seller 7 barrels with all the ale therein, 1*l*.; a silver

beaker, 10*s*.; 3 dozen bottles and a trunell bedstead, 10*s*.; a brewing lead with a sack of malt in drink, 2*l*. 10*s*.; a great tub, and a flackitt with 2 vessels full of alicor, 1*l*. 3*s*. 4*d*.; in a drinking room a table and form * —; a looking glass, an hour glass, a chafeing dish, and 6 queashings, 10*s*.; a case of knives, 2*s*.; 89 lb. of powder, at 8*d*. per lb., 2*l*. 19*s*. 1*d*.; his purse and parralation, 5*l*.; 2 old craises, 2*s*. 6*d*.; a nett and some rabbit skins, 1*s*. 6*d*.; 100 sheep skins in the pitt, —*l*.; 2 paire of buckskins, 1*l*.; a parcell of sheep and calf leather dressed, 2*l*.; 4 stone of doe pens, 8*s*.; 100 dried calves skins, and 6 dyed horse skins, 5*l*. 5*s*.; some furs drest up, 15*s*.; a parcel of fur gloves, and a parcel of other gloves, 2*l*. 16*s*. 8*d*.; a fourmard trap, 6*d*.

1681.—Signe and signe post, 10*s*.; 2 wine bowles and 2 spoons, 1*l*. 10*s*.; one hopper and hoppers, 2*s*.; a clock, 1*l*. 5*s*.; a gun, 10*s*.; a rapier, a glass case, and a bee skep, 6*s*. 8*d*.; 8 sickles, 1*s*.; an old coach with glasses, 2*l*.; one survoighing table and chaine, 10*s*.; 9 boxes and a case of knives, 10*s*.

1682.—One cubbert and a livery cubbert, 12*s*.; 14 flaggons and quarts, 1*l*. 10*s*.; 11 pieces of pewter and a posset boule, 12*s*.; 9 barrels, 1*l*. 6*s*. 8*d*.; 2 barrels, 2 kitts, a chirn, 2 silas, and 2 benn kits, 4*s*.; one crud scumer, one riple comb stock, and an oatmeal trough, 2*s*.; 2 milking kitts, 2 ben-kits, and a flack, 1*s*. 6*d*.; for levering corn and feeding it, 1*s*. 2*d*.; fine for chimney money, 1*s*.; 12 sacks, and 2 winell pokes, 10*s*.; 2 pecks of apples, and a sack of charcoal, 1*s*. 8*d*.; one small gun, and one raiper, 10*s*.; a rack of mutton, 6*d*.; for threshing one day, 6*d*.; 6 stone 8 lb. of lead, at 1*s*. 2*d*. per stone, 7*s*. 8*d*.; 3 skeels, 2 piggon, and a flackitt, 2*s*.; 17 stone of pewter, at 8*s*. 6*d*. 18*s*.; 2 brass mortars, 2 stone, 9*s*. 4*d*.; 8 stone of buttery ware, 1*l*. 17*s*. 4*d*.; 5 stone of pott-mettle, 1*l*. 15*s*.

* Between the years 1668 and 1678 no Inventories have been preserved.

1683.—A burden piece, 5s.; a windeteld and sexa, a skuttle, and a ridle, 5s.; 5 dozen lasts, 6 paire of shoes, shopwindow, and a cutting knife, — 1.

1685.—1 lb. of candles, 4d.; 11 lb. of candles, 8s. 8d.; in rendered tallow and candles, 21l.; a copper pan, a trough, a candle case, a stage, candle rods, and 4 tubs, 2l.

1686.—A goufer iron and frying pan, 5s. 6d.; a carbine, a sword, and a pistol, 10s.

1687.—4 cwt. 2 qr. of new iron, 3l. 4s. 6d.; 8 stone of old iron, 9s. 4d.; 7 dozen of horseshoes, 14s.; a paire of bellows and a spice box, 1s.; a little skellet, 10d.; calfe swivells, 2d.; a battle dore and a rowlin pin, 2d.; 2 silver tumblers and a table cloth, 1l.; 2 bibles, 2s. 6d.; 6 flint glasses, 1s. 8d.; 108½ lb. of pewter, at 10d. per lb., 4l. 10s. 5d.; 15 lb. of pott brass, 5s.; 24 dussen of trenchers, 3s. Mary Shilton, of Swinfleet: 2 gounes, a pair of stayes, 2 petticoats, a yard of new carsey, and a cloth hud, 1l. 5s.; 5 blew aprons, a paire of bodies, and 3 paire of stockings, 5s.; a say apron, 1s. 6d.; *her linen cles*: 2 shifts, 4s.; 3 white huds, 5s. 6d.; a paire of white sleeves and a white apron, 2s.; 3 hankercheifes, 2s.; 2 piners, 3s.; 11 coyfes, 9s.; *her night close*, 1s.;

a black whiak, 1s.; 2 paire of gloves and a pockit grater, 1s.; a silver bodkin, 1s. 6d.; 2 paire of shooes and a paire of pattons, 2s. 6d.

1689.—A sack of malt, 2 barrels of ale, and other drink, 1l. 4s.

1690.—A Dutch plough, an English plough, and a harrow, 1l.; avarage in the closes, 1l.; cobert, pewter, and other emblements in the house, 10s.

1691.—A case of small silver tipt bottles, with some glasses, 10s.; a screen and old groaning chair, 5s.; a stone of brasswork and a copper frying pan, 7s. 6d.; a mortar and pestil, and 2 small cupboards, 8s.*

1692.—Brandy and strong water, 8s.; 10 threave of thatch, 5s.; 10 earning bags, 4s. 6d.

1693.—A clock and watch, and part of a gun, and linnen yarn, 15s.; apriware and silver plate, 6l.; 50 medicine pots, at 4d. per pot, 16s.; 8 doz. of biskitt plates, 2s. 8d.; a silver spoon and a taster, 10s.; shelves, pots, and a runlet, 3s. 6d.; oyle and annis seed wather, 12s.; all his bookes, and some bottles, 1l. 10s.; 4 chists, 2 brass morters and weights, a stone mortar, and shelves in the shop, 2l.; 10 case of boxes, glasses, and pots, with all ye apothecary stuff and drugs in ye shop, 7l. 19s.;

* These were the possessions of Doctor Michael Talbot, who was living at Snaith in 1678, and was bur. there Sept. 24, 1691. His Inventory is dated Oct. 5; he had also in plate, 10l.; in ready money, 130l. and in desperate debts, 30l. He bur. his wife Katherine Nov. 13, 1690, and bapt. the following children: Katherine, March 27, 1672; Frances, May 29, 1673; Margaret, Jan. 17, 1679-80; Hanna, Apr. 26, 1682; John, Apr. 17, 1684, bur. July 6, 1686; Trentham, Sept. 10, 1685; and bur. the following: Winifred, Feb. 23, 1674-5; Anna, May 24, 1677. In his will, dated Sept. 20, 1691, he mentions his daughters Margaret, Catherine, and Frances Talbot; he gives his son Trentham Talbott his land when 21, and till then 12l. a year; he gives him also his books, still pot, limbeck, cold still, jack, and clock.

Ann, daughter of Edward Talbutt, of Carleton, was bapt. at Snaith, March 14, 1592-3; and in 1595, March 30, Mr. Talbott owes the Queen's Coroner, 10s.

The items under the year 1693 belonged to Hercules Buck, of Snaith, apothecary, whose Inventory is dated Oct. 21; he was bur. Sept. 12, aged 65.

There are the following notices of medical men:—1679, Robert Empson, of Goole, owes to Lance Cooper, ye chyrurgeon, 14s. 4d.; to James Bachus, chyrurgeon, 3s.

In 1733, Bryan Ferrand of Snaith, apothecary.

1742, A man of Carleton owes to Dr. Dent, 1l. 5s.

1751, Aug. 1, Wm. Kellam, apothecary, bur.

1777, Oct. 29, Wm. Perkins, gent., apothecary, bur.

1778, Feb. 27, John Hardy, apothecary, bur.

- liquoras taken up, 1*l.* 12*s.* 8*d.*; liquoras in ye ground, 1*l.*
- 1694.—A posset pot and white plates, 1*s.* 8*d.*; a paire of shoes, 2*s.* 8*d.*; a silver ball, 10*s.*; 2 pistols and a raper, 5*s.* 8*d.*; 14 lb. of candles, 5*s.* 10*d.*
- 1695.—A gun, 5*s.*; 2 hagna saddles, a pannell and bridell, with a pilyon seate, 5*l.*
- 1696.—A Flanders wheele, 5*s.*
- 1697.—8 calf skins, 8*s.*; 2½ doz. lamb lether, 7*s.* 6*d.*; 3½ doz. sheep lether, 19*s.*; 3½ doz. pelts in the pitta, 14*s.*; 9 sheepskins, 4*s.* 6*d.*; 15 lamb pelts, 8*s.* 9*d.*; 3 little calf skins, 2*s.* 9*d.*; 4 paire leather britches, 8*s.* 9*d.*; 1 doz. paire of gloves, 4*s.*; the fire elding, 10*s.*
- 1700.—William Hopkinson, of Rancilif: 1 coats and waistcoat, 1*s.* 6*d.*; 1 pair of britches, 6*d.*; 2 coats more, 10*s.*; 2 shirts, 4*s.* 6*d.*; 6 neck cloths, 2 pocket handcirtchers, and 1 capp, 4*s.*; 1 pair of ould britches, 2*s.*; 2 hatts, 1 paire of stockins, and 1 paire of shows, 2*s.* 6*d.*; 4 loomes, with all the other working tooles belonging his traid, 6*l.*; disbursed for crowner's fees and other charges aboute his watching and burying, 1*l.* 2*s.* 6*d.*
- 1702.—1½ gallon of oil, 3*s.*
- 1703.—2 great barrels of ale, 2 little ones, and gaintrees, 2*l.* 10*s.*
- 1708.—A pair of boy's shoes, 3*s.*; a pair of girl's shoes, 2*s.* 4*d.*; a hat, 1*s.* 10*d.*; to ye surgeon for cuering a bile, 6*d.*; half a year's table before Will was bound apprentice, for 1 year 5 months table for a girl, 5*l.* 13*s.* 4*d.*; paid for letting blood, 6*d.*; for brimstone and jollup for Jane, 8*d.*
- 1715.—*Snaithe*. — 15 dozen candles, 3*l.* 19*s.* 2*d.*; 2 cwt. starch, 1½ cwt. of sugar, 6*l.* 4*s.*; 2 cwt. sugar at 6*d.*, 4*l.* 16*s.*; 1½ cwt. flour brimstone, 1*l.* 7*s.*; half a
- barrell of lope Brandy, 2*l.* 3*s.* 6*d.*; raysons and 1 cwt. sugar, 2*l.* 2*s.* 6*d.*; 1 cwt. of brimstone and mace pepper, 4*l.* 9*s.*; best tobacco and 1 barrill of tobacco, 9*l.* 6*s.* 8*d.*; 2 ton 7 cwt. of salt, at 23*s.* 8*d.*, 23*l.* 8*s.*; 2 knitting needles, 1 dusan of washballs, 2*s.*; 1 qr. of buttons, 8*d.*; a dusan horn comes, 1*s.*; 2½ dusan hornbooks, 2*s.* 6*d.*
- 1719.—135 gallons of ale, 5*l.* 12*s.*; 8 bottles of claret, 8*s.*; 5 dozen of cyder, 1*l.* 15*s.*
- 1724.—Kale pott, 7*s.* 6*d.*; 4 sickles, 4*d.*; leaven tubb and swine-tub, 2*s.*; hencall, 1*s.*; grass sledge, 5*s.*; a rowle, 10*s.*
- 1728.—A weather glass, 4*s.* 6*d.*; 2 buckskins, 5 sheepskins, 1*l.* 1*s.*
- 1730.—A gun, 1*l.* 11*s.* 6*d.*
- 1732.—8 hides and other pieces of leather, 10*l.*; 60 pair of shoes, 6*l.*; two wigs, 2*s.*; 5 pictures, 1*s.* 4*d.*;* a picture de la Virgo, and 4 old maps, 1*s.* 6*d.*; a cane, 1*s.*; 3 trusses, 1*s.*; 2 pairs of spectacles, 4*d.*; a prospective glass, 1*s.*; a brass candlestick and saveall, 1*s.*; a dicill and a sope ball, 6*d.*; 2 yda. of callamancoe, 1*s.* 2*d.*
- 1733.—123 sheep and calf skins, 1*l.* 10*s.*; 3 horsehides and 18 foal skins, 11*s.*; 18 pairs of gloves and a pair of mitens, 3*s.*; a silver watch, 2*l.* 10*s.*; 8 pictures, 4*s.*; 5 pictures unframed, 2*s.* 6*d.*; 2 canes and gaugeing sticks, 10*s.* 6*d.*
- 1737.—2 hogsheads of sugar, 30*l.*; 36 pieces of calamancoe, 36*l.*; 6 pieces of dimothy, 5*l.*; 20 pieces of kersey, 60*l.*
- 1738.—A buroe, 1*l.*; a pair of silver buckles for shoes, for knees, and do. stock, do., 11*s.*; watch and chain, 8*l.* 10*s.*; punch ladle, 7*s.*; 2 rings, 1*l.* 10*s.*; 2 bibles, 7*s.* 6*d.*; 2 saddles and a short whip, 15*s.*; a mail trunk, another trunk, and saddle bags, 5*s.*;

* This item occurs in the Inventory of John Lodge of Carleton, gent., Sept. 8, 1732. In his Will, dated March 15, 1721-2, he gives 3*l.* to the poor of Bedale and Askew, and names his sister Ann Lodge of Brunton, his nephews, Christopher, Miles, Joseph, and Edward Lodge; his nephews, Robert Bishop, prick, John Brewer, John Shan, Joseph Liptrott, and Christopher Smith; his nieces Dorothy Lodge, Dorothy, daughter of Stephen Lodge, and Mary Liptrott; and makes his nephew John Lodge (of Brunton-super-Swail, gent.) Executor.

all in the cellar, the widow says not above 6 bushells of malt and barrels, 1*l.* 10*s.**

1742.—A goose call, 2*s.*; ffother and fir elding, 2*l.*

1743.—90 gallons of ale at 9*d.*, 3*l.* 7*s.* 6*d.*

1748.—1 stone of rice, 2*s.* 4*d.*; 1 stone of sugar, 5*s.* 10*d.*; 12 lb. soap, 5*s.*; 8 lb. candles, 3*s.* 4*d.*; 2 lb. blew figgs, 2*s.*; 2 Leghorn batts, 2*s.*; 47 yards of Manchester cotton, 2*l.* 0*s.* 1*½d.*

1768.—3 dozen sickles, 9*s.*

1772.—Ale, 70 gallons, 1 bottle of red wine, 2 bottles of rum, 1 bottle of brandy, and one half-bottle of gin, 5*l.* 6*s.* 10*d.*; 2 quarts of red port, 2 bottles of white wine, a gallon of sweet Mountain, 3 gallons of white port, 2 bottles of white wine, 18 quarts of rum, 10 quarts of brandy, 10 bot-

tles of spruce beer, a half-hogshead of ale, full, a ten-gallon cask of gin, full, a thirteen-gallon cask of rum, full, a cask of porter, and 120 gallons of ale, sold for 25*l.* 6*s.*; a water-cart, 15*s.*; 8*½* stone of hoppers, 5*l.* 10*s.*

1773.—A gun, 6*s.*

1781.—March 5.—*Swinfleet*.—10 lb. of tobacco at 18*d.*, 15*s.*; 8 dozen candles at 6*s.* 4*d.*, 2*l.* 10*s.* 8*d.*; $\frac{1}{4}$ cwt. of salt, 5*s.* 3*d.*; 1 lb. of tea, 6*s.*; 8 lb. of starch, 3*s.* 4*d.*; 7 lb. of snuff, 14*s.*; 28 lb. of hopp, 14*s.*; 2 stone of shott, 2*s.* 5*d.*; 3 lb. of tea at 6*s.* 4*d.*, 19*s.*; 5 lb. of tobacco, 10*s.*; 1 stone of sugar, 7*s.* 10*d.*; 14 lb. of soap, 7*s.*; 2 lb. of battle powder, 3*s.* 4*d.*; 1 leaven tub, 3*s.*

1783.—A hay mow, 4*l.*; 2 pieces of wildbore Tommy, 2*l.* 10*s.*; charcoal and utensils in the dyehouse, 3*l.* 5*s.*

In order that the reader may compare the prices in a neighbouring market, I print the following extracts from the "Selby Peculiar," which includes the following places, Barlow, Brayton, Breckonhill house, Burn, Burton, Gateforth, Hambleton, Lund, Selby, Thorpe Willoughby.

1691.—2 mares and a horse, 2*l.* 10*s.*; 9 weels on the grass bleaching, 19*s.*

1695.—6*½* a. pease, 2*l.* 13*s.* 4*d.*; 2 mares, 4*l.*

1700.—25 cheeses, 13*s.* 4*d.*; 2 cow gates, 2*l.* 2*s.*; a load of coals, 8*s.* 4*d.*

1710.—One-thirty-second part of a ship, 14*l.* 1*s.* 8*d.*

1712.—A barrrell of Ellycar, 4 gallons, 5*s.*; Inv. of Gabriel Brook, of Barton; gent.,† 4 cows, a heifer, and a bull

* These articles appear in the Inventory of William Wintringham of Snaith, Innholder, who died August 1, 1738, aged 45. M. I. In his Will, dated June 29, proved September 26, the same year, he names his mother Ursula, his sister Elizabeth, wife of Marmaduke Wilkinson, his sister Hannah, wife of John South, and his mother-in-law Susanna Rhodes. By his first wife, Elizabeth Sykes of Cowick (mar. November 30, 1729; bur. September 18, 1732), he had a son, Robert, born September 4; bapt. September 29. 1730; living in 1738. In the presentments occurs this notice—"1733, May 30, Mr. Hook married Wm. Wintringham and * * * Saunderson, widow, both of Carleton, by License, from Mr. Arnett at Carleton." This second wife was Dorothy, daughter of Wm. Beckwith of Thurcroft, Esq., (South Yorkshire, I. 294), who died October 7, and was bur. October 9, 1734, aged 30, M. I. the South Aisle of the Church of Snaith. Her first husband, George Saunders, gent., who appears to have been an exciseman, made his Will March 29, (proved October 20, 1733), he desiring to be buried in the church of Hyth (near Howden), and whereas Wm. Beckwith of Thurcroft was bound to pay 1,000*l.* to his wife Dorothy (Beckwith); "for the great love I have to my wife I give 500*l.* thereof to the said Wm. Beckwith and John Murfin of Harehutton, Esq., for her sole and peculiar benefit."

† His will is dated July 17; he gives his wife Faith lands in Gateforth, &c., she paying 5*l.* per annum to his sister Eliza Gower—then to his son Humphrey—he names his grandson Walter, his son Calisthenes, and daughter Anne. Administration was granted Sept. 4, to his son Callisthenes.

Humphrey Brook, of Burton, gent., made his will Sept. 6, 1720, giving all his goods to his daughter-in-law Susanna Elizabeth Tomlinson, to whom administration was granted Dec. 28, 1720, she being then wife of Humphrey Brooke, of Gateforth, gent. Humphrey Brooke, of Burton, gent., administered July 4, 1721, to Faith Brooke, widow.

- calf, 18*l.*; 10 young beasts, 5 steers, and 5 heifers, 18*l.*; 3 calves a year old, 3*l.*; 3 calves at stake, 1*l.* 10*s.*; 3 pigs, 15*s.*; 4 draught horses, 10*l.*; 13 couple of ewes and lambs and 16 geld sheep, 7*l.* 10*s.*; 6 acres of rye, 6*l.*; 8 acres of barley, 8*l.*; 4 acres of pease, 3*l.*; 3 acres of oats and skegg, 2*l.* 5*s.*
- 1713.—6 hides, 4 white hides, and 2 kipps, 3*l.* 5*s.* 6*d.*
- 1716.—3 acres of rapes, sown, 8*l.*; a boat, 1*l.*; 5 nettas, 12*s.* 6*d.*; 12 white hides, 18*s.*; 2½ dozen calf skins, 2*l.* 8*s.*; 16 backs, 8*l.*; 9 hides, 4*l.* 10*s.*
- 1717.—2 guns, 7*s.* 6*d.*; 2 basins, 2*s.*; a brass mortar and pestill, one liquomvity (! *lignum vite*), mortar and pestill, 13*s.*; drugs in the shop, 1*l.* 16*s.* 3*d.*; 4 acres of rape, 10*l.*; ¼ acre of rye, 1*l.*; 2000 quills, 6*s.*; 3 yds. of Scotch cloth, 3*s.*; 15 yds. of sameran, 11*s.* 3*d.*; 17 woollen caps, 5*s.* 8*d.*; 4 doz. course hatts for boys, 1*l.* 8*s.*; 2 doz. course hatts for men, 1*l.* 4*s.*; 3 doz. of men felt hatts, 2*l.* 14*s.*; 1½ doz. Carolina hatts, 4*l.*;
- 1 doz. bowstrings, 15*s.*; 4 doz. worstt stockings, 3*l.* 12*s.*; 7 doz. men's garn stockings, 4*l.* 4*s.*; 3 doz. women's stockings, 18*s.*; 1 doz. girl stockings, 3*s.*; 1 doz. stomachers, 6*s.*
- 1718.—53 sheep, 22*l.* 10*s.*
- 1721.—Apples, 2*s.* per bushell; a load of hay, 12*s.*; a lb. of wool, 4½*d.*; wheat, 1*s.* 1½*d.* per stook; corn, 1*s.* 10*d.* per stook; 29 cheeses, 1*l.* 9*s.*; 13 large dublers, 75 lb. at 8*d.*, 2*l.* 10*s.*; 19 lb. of old pewter at 7*d.*, 11*s.* 1*d.*; a silver tankard, 2 tumblers, 3 spoones, and a corall, 7*l.* 10*s.*; 40 cheeses, 1*l.* 4*s.*; 5 acres of rape in the ground, 20*l.*
- 1722.—6 oxen, 33*l.*; 4 small oxen, 12*l.*; 6 heifers, 10 two-year-old beasts, 34*l.*; 9 milk cows, 30*l.* 10*s.*; a stott, 2 bulls, and 8 calves, 14*l.* 10*s.*; 15 mares and geldings, 72*l.*; 10 sheep, 3*l.*; a sow, 7 pigs, and 2 fat hoggs, 6*l.* 17*s.*; a bay of oats in the barn, 12*l.*; 6 horses, 18*l.*
- 1727.—A mare and foal, 4*l.* 15*s.*; a black mare, 5*l.* 15*s.*; a white mare, 3*l.* 10*s.*
- 1781.—5 cows, 16*l.*; 4 hoddling pigs, 2*l.* 10*s.*

Note.—With a view of placing before the reader the circumstances under which Inventories were rendered in the Ecclesiastical Court, I annex the following references, viz. :—

Executors and Administrators were required, by statute 21 Henry VIII, cap. 5, (year 1539) within three months after the death, to deliver to the Ordinary, upon oath, an inventory of the goods of the deceased, with their value appraised by indifferent persons. In case his goods outside the jurisdiction in which he died, amounted to 5*l.*, (Canons 92, 93, 126) the authority of the Judge of the Peculiar was superseded by the Archbishop's Prerogative Court.

The Court fees are always specified among the debts owing by the testator, such as : 1581.—For the Deane and his Officers 3*s.* 4*d.* 1595.—Funeral expenses, for the fees of -probacon of the Will, for engrossing the Wills and Inventories, for the mortuarie, for fees of counsell, and other charges in and about the same 4*l.* 1688.—for administration at Snaith 18*s.* 4*d.*, for writing a certificate that was red in ye church, 6*d.* 1692.—Pd. to Mr. Dobson for proving the Will and taking division 1*l.* 15*s.* See also Canons 132, 135.

Comparative View of the Money-Rate of WAGES in GLASGOW and the West of Scotland, in 1851, 1856, and 1858. By JOHN STRANG, LL.D.

[Read before Section (F.) Economic Science and Statistics, of the British Association for the Advancement of Science, at Leeds, on 25th September, 1858.]

It may perhaps be in the recollection of certain Members of the Economic Section of the British Association, that at the meeting held in Cheltenham in 1856, I had the honour of submitting a Paper on the Money-Rate of Wages of Labour in Glasgow and the West of Scotland, the result of which was, that during the five or six years preceding 1856 a gradual and permanent rise appeared to have been established in *all Wages* connected with the leading industries of Glasgow, and that, too, notwithstanding a great reduction made in the hours of labour.

Under the altered circumstances of the country, occasioned by the late Monetary Crisis, the important question now arises, whether or not this gradual and progressive rise in the Money-Rate of Wages has been arrested and reversed, and if so, to what extent?

With a view of, in some degree, solving this question and continuing our chronicle of the labour value of the West of Scotland, I have again made inquiries into this matter, and have selected from the long list of mechanics, handicraftsmen, and labourers, a few of those who are engaged on the production of the great staples which belong to that district, premising that the following facts in general are based as formerly stated on Returns made to me by some of the leading Manufacturers, Engineers, Ironmasters, and Builders of Glasgow and surrounding District, and that they are not general Estimates, but are founded on the Wages' Books of the several Concerns to which they apply.

We begin with the Cotton Spinners, Power-loom Weavers, and other workers in the Factories in the West of Scotland, of which Glasgow is the central mart, and whose numbers cannot be less than 30,000. It appears that the average rate of Wages paid to such persons in 1851, 1856, and 1858, were as given in Table (A.)

From the following Table (A) it appears that the Wages of the Factory Workers have been considerably increased since 1851—that they reached their maximum in 1856—and that since the panic at the close of 1857, they have fallen nearly 20 per cent. It must be remembered, however, that although the sums gained by Workers have been, during these seven years, much increased, and are even now more than they were in 1851, still the real cost of the manual labour in the work done is greatly diminished. The truth is, the

increase has been obtained altogether through the improvements in machinery and in the art of manufacturing, and as these improvements are still in progress it is more than probable that the hands, being now chiefly on piece-work, will gain ere long as high Wages as ever they did.

(A.) *Wages—COTTON TRADE—West of Scotland—Weekly Rates.*

Occupation.	1851.	1856.	1858.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Power-loom Weavers ...	8 9	10 9	9 9
Spinners	25 —	30 —	27 —
Winders	8 —	9 —	9 —
Warpers	12 —	17 —	16 6
Dressers	32 —	40 —	35 —
Tenters	30 —	40 —	38 —
Twisters	9 —	12 —	12 —
Mechanics	24 —	27 —	26 —
Labourers	12 —	17 —	15 —

Following the course pursued in our former Paper, let us next note the Wages of two of the most important Industries of the West of Scotland, I mean the comparative rates paid to those employed in Mines and Iron Works, whose numbers in the year 1854-5 amounted to 32,900, and whose united Wages during those twelvemonths reached the large sum of 1,976,000*l.*

(B.) *Average Daily Rate of MINING LABOUR from 1852-58.*

Occupation.	1852.	1854.	1856.	1858.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Miners	2 6	5 —	5 —	3 —

(C.) *Average Daily Rate of Wages paid to Workmen connected with the Manufacture of PIG AND MALLEABLE IRON, 1852-58.*

Occupation.	1852.	1854.	1856.	1858.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Blast Furnace-keepers	5 —	6 8	7 9	5 —
Do. Assistants	3 2	4 2	4 2	3 3
Do. Fillers	2 8	3 10	4 2	3 9
Puddlers, including under hands	7 6	10 6	10 —	9 —
Rollers (Chief Rollers)	10 —	14 6	13 6	12 —
Labourers	1 6	2 1	2 —	2 —

From the foregoing Tables it appears that while there was a gradual and important rise from 1852 to 1856 in the Wages of those employed in the Coal and Iron Mines as well as of those employed in the manufacture of pig and malleable iron, there is a marked diminution in the Wages of all employed in these industries in 1858, with the exception of the labourers or unskilled workmen. This fall of Wages followed almost immediately on the Commercial Crisis of 1857; but it will be observed, that although the reduction is great, the rate even now is considerably higher than in 1852.

The third industry in our list to which we would call attention is the Wages of Engineers and Mechanics, a very large class of workers in Glasgow and its neighbourhood. The following is the average rate of these per day of ten hours during the last eight years :

(D.) *Average Daily Wages—ENGINEERS AND MECHANICS—1851-58.*

	Shillings.		Shillings.
1851	3·43	1855	3·99
1852	3·52	1856	4·
1853	3·82	1857	3·97
1854	3·97	1858	3·92

Here again it will be found that up to 1857, Engineers' and Mechanics' Wages gradually advanced, but since that period they have diminished, though still above those of 1851.

The fourth industry we would next mention is that of Building or House Construction. Considering the mighty advance which Glasgow has made during the last ten years in its population, and the necessary increase in the number of its habitations and places of business, it is easy to conceive how very large the employment must have been, and still is, of those engaged in this business. Among the many handicraftsmen employed in the construction of Houses, Warehouses, Factories, and other buildings, we shall as formerly limit ourselves to Stone Quarriers, Masons, Carpenters, and Labourers.

The following is the rate of Wages paid to *Quarriers* from 1851 to 1858 for 60 hours' work.

(E.) *Average Weekly Wages—QUARRIERS—1851-58.*

	Shillings.		Shillings.
1851	14 per week.	1855	20 per week.
1852	16 „	1856	22 „
1853	17 „	1857	22 „
1854	19 „	1858	19 to 20 „

This Table shows a fall of fully 2s. since 1857.

The following is the average rate paid to Masons from 1850 to 1856.

(F.) *Average Weekly Wages—Masons—1851-56 and 56-58.*

	s.	d.		s.	d.
During the Summer of 1850 and 1851	21	-	During the Summer of 1853	23	9
„ Winter of do.	18	-	„ „ 1854	25	-
„ Summer of 1852 {	21	-	„ „ 1855	25	-
and	18	-	„ „ 1856	25	-
	18	-			

In September, 1856, an addition was made for Masons and the rate fixed per hour as follows :

	Per Hour.	Per Week of 57 Hrs.
	d.	£ s. d.
Sept. 19th, 1856	5½	1 6 1½
Dec. 12th, „	5½	1 4 11
May 15th, 1857	5	1 3 9
July 24th, „	5½	1 4 11
Aug. 7th, „	5½	1 6 1½
Nov. 6th, „	5	1 3 9
March 1st, 1858	4½	1 2 6½
Aug. 1st, „	4½	1 2 6½

When these Wages are contrasted with those of 1856 it will be found that there has been a diminution on Masons' Wages of 3s. 6d. per week.

The following is the rate of Wages paid to Carpenters and Joiners from 1851 till 1858.

(G.) *Average Weekly Wages—CARPENTERS—1851-58.*

Shillings.		Shillings.
1851 21	per week of 60 hours.	1855 24 per week of 57 hrs.
1852 22	„ „	1856 24 „ „
1853 23	„ „	1857 till Nov. 26 „ „
1854 24	„ 57 hours.	1858 24 „ „

From the foregoing statement it appears that since 1856 there has been no change of Joiners' Wages, although during the interval they rose to 26s. per week. This rise continued from 20th March, 1857, when a strike took place, till 13th November, 1857, the period of the Commercial Crisis. The rate falling from 5½d. per hour to 5d., at which the Wages remain, with this addition, that if the men work before 6 o'clock in the morning, or in the evening after that hour, they receive 7½d. per hour for the additional time they labour.

The following is the rate paid to Common Labourers connected with all matters of House Construction.

(H.) *Average Weekly Wages—COMMON LABOURERS—1850-58.*

	s.	d.	
1850, '51, and '52.....	12	-	per week of 57 hours.
1853	14	-	„ „
1854, '55, and '56.....	17	-	„ „
1857	16	-	„ „
1858	15	9	„ „

The fall on Unskilled Labour since the panic has only been 3*d.* per week, while the present rates when compared with what was paid from 1850 to 1853 shows an increase of 3*s.* 9*d.* per week. These labourers are almost exclusively Irish, a circumstance which at once explains this great, and, we may almost add, permanent rise. It may be here remarked, however, that there are considerably fewer labourers employed at the present time than there were in 1856, and in a few months more there will be fewer still. The fact is, that the numbers wanted during the late excessive and uncalled-for speculation in building have been checked by the failure of the Builders, who having no capital but what they could obtain on mortgage, have by building, no doubt, benefited the landowners and the mortgagees to the extent of securing the ground rents of the one and the interest of the other; but have ruined themselves, and left their poor creditors, the Masons, Carpenters, Plasterers, &c., in the lurch.

Let us now in conclusion turn to the Hand-loom Weavers, of all workmen the least remunerated for their labour. In our last Paper we showed, from the facility with which this art can be learned, the numbers which unfortunately rushed to this work frequently creating an equal competition between the father and the child, coupled with the competition of Power-loom labour that a progressive fall had taken place from 1825 to 1851, when a slight revulsion took place that raised the average rate from 5*s.* 8*d.* per week in 1851, to 7*s.* 1*d.* in 1856. But even this pitiful payment has been affected since that period, as the following Table of Average Wages for the commonest plain work will best illustrate:—

(I.) *Average Weekly Wages*—HAND-LOOM WEAVERS—1851-58.

<i>s.</i>	<i>d.</i>		<i>s.</i>	<i>d.</i>	
1851	5	8 { per week for men, boys, and girls.	1856	7	1 { per week for men, boys, and girls.
1852	6	9 " "	1857	6	4 " "
1853	7	- " "	1858	5	9 " "

When we examine, however, into the Wages obtained by the Hand-loom Weavers of coloured and fancy work, we find the Wages better. The fall from 1856 to 1858, even at this work, has been proportionally greater; for example:—

	1856.		1858.
	<i>s.</i> <i>d.</i>		<i>s.</i> <i>d.</i>
Cotton Fabrics.....	9 3 per week.	.....	7 9 per week.
Mixed Fancy Dress Fabrics....	14 - "	.....	10 - "

It is gratifying to state, that during the last few years there has been a gradual diminution of Hand-loom Weavers in the West of Scotland, and from the fact of the Army and the Militia having lately drawn off so many of them from the North of Ireland, who

were formerly employed by Glasgow Manufacturers, the number is now so low as to make it certain that on the least extra demand for Hand-loom Weavers a rise on the rate of Wages must inevitably take place.

From the foregoing statements and figures it seems quite plain, that when the money-rate of Wages in 1856 is compared with that of 1858, a considerable fall will be found to have taken place in all the leading Industries of the West of Scotland; and yet, if this comparison be carried back to 1851, it will also be found that the rate even since that period has risen. In short, it appears probable that the present reduction, though striking, is exceptional, and that the gradual rise, which previous to 1857 had taken place in all kinds of labour, will ere long return. There is one thing, however, quite certain, that while the present money-rate of Wages is lower than it was in 1855 and '56, the articles for every day subsistence are also lower; in short, if the labour even now given in money be measured in bread, it will be found that the workman's real position is little altered. In 1856 the average price of a Quarter of Wheat throughout England and Wales was 72s. 3d., whereas in 1858 it is only 44s. 1d., while the prices of Beef and Mutton were at Leadenhall Market in 1856, respectively, 5½d. and 6d. per pound, they were in 1858 5½d. and 5¼d. per lb. In Glasgow the average price of Wheat, 240 lbs, was 36s., and of Flour per barrel, 35s., in 1856; whereas at present the former is 22s. and the latter 22s. 3d.

In one word, were we to draw out a Comparative Table illustrating the Prices of the chief articles of consumption which enter into the domestic economy of the artisan and labourer, and contrast them with the Money-Rate of Wages in 1856 and 1858, it would then be seen that the prudent and frugal workmen ought not to be in much worse circumstances now than they were when their wages were higher. As, however, we believe in the axiom laid down by McCulloch, in his valuable treatise on Wages and Labour, "that no country can be flourishing where Wages are low, and none long depressed when they are high," it is our hope that the check given to the rise on Wages at the close of 1857 will be only temporary, and that by improved machinery, lessened cost of production, and more extensive consumption over the world and at home for our great staples, the condition and comfort of the industrious workman may be gradually and permanently raised.

On the INDUSTRIAL and SANITARY ECONOMY of the BOROUGH of LEEDS, in 1858. By ROBERT BAKER, one of the Inspectors of Factories.

[Read before Section (F.) Economic Science and Statistics, of the British Association for the Advancement of Science, at Leeds, on 24th September, 1858.]

CONTENTS:

	PAGE		PAGE
I.—Topographical Divisions.....	427	V.—Paper, Tobacco, and Pottery	
II.—Population and Houses	430	Trades	439
III.—Woollen, Worsted, Flax and			
Silk Trades	434	VI.—Chemical and Coal Trades....	440
IV.—Iron and Machine-Making			
Trades	438	VII.—Conclusion	442

I.—Topographical Divisions.

THE Borough of Leeds comprises the Township of Leeds, and the out-Townships of Farnley, Potter Newton, Chapel Town, Beeston, Headingley with Burley, Bramley, Armley, Wortley, Hunslet, and Holbeck, all in the Parish of Leeds; and Osmondthorpe and Coldcotes, which are small hamlets in the Parish of Whitkirk. Its Parliamentary and Municipal territory are co-extensive. In the year 1080, Leeds proper was a farming village, with an estimated population of somewhat less than 300, including 27 villeins and 4 soke men; and the manor consisted of about 1,000 acres. In 1081 it had a Priest, a Church, and a Mill, of the yearly value of 4s., and ten acres of meadow. In 1853, it has a population of 112,945 souls, engaged in more varied works than perhaps those of any other Town in the Kingdom. Bede in 735 calls Leeds, Leodys, and the Domesday Survey, Leedes; and Thoresby says, it was one of the 28 cities of ancient Britain mentioned by Nennius, and called the city of "Loid in the Wood." The out-Townships, as they are called, are said to derive their names as follows:—

1st. *Hunslet*—[Population in 1851, 19,466; area in statute acres, 1100]—from "Hunde," a dog, and "Slet," a house, because of the number of dogs which were formerly kept here. [There was a water corn mill at Hunslet in the 13th century.] Its population is employed in the manufacture of Flax, Woollens, Iron, Glass, Wire, Glue, Earthenware, Chemicals, Locomotive Engines and Carriages, Steam Boilers, and the getting of Coal.

2nd. *Holbeck*—[Population in 1851, 14,152; area in statute acres, 760]—derives its name from the Saxon word "Hol," a low place, and "Beck," or the brook which flows through it.

It is described by a recent historian, as "one of the most crowded, one of the most filthy, one of the most unpleasant, and one of the most unhealthy villages of the County of York."

It is true, that the fair meadows once possessed by Holbeck, of which the writer also speaks, are now covered with houses and workshops,—that the trees which adorned them have been cut down, and that the air is somewhat loaded with the black vapours which issue from its immense manufactories. But still, the description which this historian gives is greatly exaggerated. Holbeck is, and Hunslet is nearly, now united to Leeds in unbroken continuity. It was once the seat of an experiment which is worth recording, of a steam engine being put down to pump the water of the Beck on to a water wheel, by which to turn the machinery of a Factory.

It possesses a large supply of sulphureous water, once celebrated for medicinal virtues, but now required for, and applied to, manufacturing purposes. The population is employed in the manufacture of Flax, Machines, and Woollens.

3rd. *Bramley*—[Situated about four miles from Leeds, and forming the western boundary of the Parish. Population in 1851, 8,929; area in statute acres, 2,331]—is said to derive its name from "Bram," a man's name, once its possessor, and "ley," a field. Its population is mainly employed in the Woollen Manufacture, Agriculture, and the getting of the celebrated Bramley Fall Stone of Millstone grit.

4th. *Wortley*—[Situated about a mile from Leeds. Population in 1851, 7,896; area in statute acres, 1,036]—is said to derive its name from its herbage. Geologically it is a most important part of the Borough, since it contains Coal, Pipe Clay, Sanitary Pipe Clay, Iron, and Stone, all of which, as well as the Woollen Manufacture, employ its population.

5th. *Armley*—[About 1½ mile from Leeds. Population in 1851, 6,190; area in statute acres, 907]—is said to derive its name from one "Orm" or "Arm," and "ley," a field. Its population has been employed in the Woollen Manufacture for many years.

5th. *Headingley*—[About 2 miles from Leeds. Population in 1851, 6,105; area in statute acres, 3,058]—derives its name from "Hedde," a Dane, "ing," a patronymic added to his father's, and "ley," a field.

Headingley, with Burley, is full of the suburban residences of our merchants and manufacturers; whilst Kirkstall, which forms part of the same Township, contains Woollen, Worsted, and Flax Factories. There is just without the Borough, and at a short distance from the Abbey, one of the largest Iron Forges of the neighbourhood, which, in Thoresby's time (1658), was so extensive, that he declared it might serve Vulcan and his Cyclops to work in.

The Fulling Mills of Armley and Kirkstall, are, perhaps, the most ancient in this part of Yorkshire.

6th. *Chapel Allerton*—[2 miles from Leeds, north. Population in 1851, 2,842; area in statute acres, 2,747]—is said to derive its name from four adjoining hamlets called the Alder Hills. It is mainly composed of suburban residences. Its poorer population is employed in Agriculture and the getting of Stone.

7th. *Beeston*—[2½ miles from Leeds. Population in 1851, 1,973; area in statute acres, 1,535]—though now an agricultural and mining village, was once celebrated for the manufacture of Bone Lace, and Straw Hats. Coal Mines have long been worked here, and Iron is also now obtained of a peculiarly fine quality.

8th. *Farnley*—[About 2 miles from Leeds. Population in 1851, 1,722; area in statute acres, 1,990]—derives its name from the Ferns which formerly grew here in great abundance, and which to this day flourish in many parts of it. Its population is employed in Woollen Manufactures, the getting of Coal of rather an inferior quality, of Clay, particularly for Sanitary Pipes, and in the manufacture of iron.

9th. *Potter Newton*—[About 2 miles from Leeds, north. Population in 1851, 1,385; area in statute acres, 1,657]—is said to derive its name from its being a new Town in which Potteries and Brick Kilns existed, contiguous to a Roman station. It possesses many suburban residences. Its industrial population is mainly employed in Agriculture, and the getting of Stone.

Of the remaining small hamlets within the Borough, there is not much to be said. Their populations amount to 237, and are mainly employed in Iron and Coal Mines, and in Agriculture.

For Municipal purposes these out-Townships are divided into Wards, which send representatives to the Borough Council Chamber. In the following Table (A), the superficial area in statute acres, and the population in each Ward, is given.

Leeds Proper is also divided into Wards, the superficial area of each of which is also given in statute acres, in order that both within and without the Town, the density of the population upon the acre may be seen.

The following is the Table (A) giving a résumé of the facts in 1851, as regards area, houses, and population, in Leeds Proper, and in the out-Townships.

(A.)—*Borough of Leeds, 1851.—Area, Houses, and Population.*

OUT-TOWNSHIPS.	Area in Acres.	Inhabited Houses.	Population in 1851.	1851. Population to a House.	1851. Population per Acre.
Farnley	1,990	350	1,722	4·9	0·8
Potter Newton	1,657	282	1,385	4·9	0·8
Chapel Town.....	2,747	612	2,842	4·6	1·
Beeston	1,535	427	1,973	4·8	1·2
Headingley	3,058	1,222	6,105	4·9	1·9
Bramley	2,331	1,876	8,949	4·7	3·8
Armley	907	1,303	6,190	4·7	6·7
Wortley	1,036	1,672	7,896	4·7	7·6
Hunslet	1,100	4,216	19,466	4·6	17·6
Holbeck.....	760	3,099	14,152	4·5	18·6
	17,121	15,059	70,680		
LEEDS PROPER.					
North-West Ward	538	2,693	12,270	4·5	22·8
East Ward.....	657	3,781	17,421	4·6	26·5
West „	560	4,231	20,176	5·	36·
North-East Ward	541	4,564	21,301	4·6	38·
Mill Hill „	127	969	5,414	5·5	42·7
South „	123	1,363	6,677	4·9	54·2
Kirkgate „	31	632	3,337	5·3	107·6
North „	92	2,828	14,454	5·1	157·1
Leeds Proper	2,672	21,061	101,050		
Out-Towns	17,121	15,059	70,680		
	19,790	36,120	171,730		
Military			293		
			172,023		

We thus see that over the whole Borough, the population to a House, varies, so to speak, from $4\frac{1}{2}$ to $5\frac{1}{2}$; the density on the acre being from 0·8 to 157.

II.—*Population and Houses.*

In all the Townships of the Borough, with the exception of one (Beeston), and in all the Wards of the Town Proper, with the exception of Kirkgate, this density increased in the decennial period between 1841 and 1851, and it has gone on increasing up to the present period, with the exception of the Mill Hill Ward in addition to Kirkgate, in which since 1851 it has also decreased.

At the present time (1858) the population of Leeds Proper is 113,945; of the out-Townships, 77,748. The number for Leeds is calculated on the proportion of persons to a House in each Ward in 1851, the multiplicand being the number of inhabited houses in July 1858, correctly ascertained in Wards from the rate books.

That for the out-Townships is based on the per centage increase of Leeds Proper.

The superficial area of the Town of Leeds is thus shown to be in the aggregate of the Wards 2,672 acres and 2 roods, of which, in 1840, 695 acres were occupied by buildings.

(B).—*Leeds, 1840.—Superficial Area and Buildings in Acres.*

Wards.	Land.			Buildings.			Total.		
	A.	R.	P.	A.	R.	P.	A.	R.	P.
East.....	546	3	—	111	—	—	657	3	—
North-East.....	466	—	—	75	3	—	541	3	—
North-West.....	456	—	—	82	1	—	538	1	—
West.....	384	—	—	176	—	—	560	—	—
South.....	66	1	—	57	1	—	123	2	—
North.....	28	1	—	63	3	—	92	—	—
Mill Hill.....	26	1	—	101	2	—	127	3	—
Kirkgate.....	4	—	—	27	2	—	31	2	—
Total Acres.....	1,977	2	—	695	—	—	2,672	2	—

The Inhabited Houses of each Ward, with the population, and its increase or decrease, stands as follows:—

(C).—*Leeds, 1841-51-58.—Population and Inhabited Houses.*

Ward.	1841.		1851.		Population Per Cent. 51 over 41.		Houses, 1858, Over 1851.			Population, 1858, Over 1851.		
	Houses.	Popln.	Houses.	Popln.	Inc.	Dec.	Houses.	Inc.	Dec.	Pop.	Inc.	Dec.
East.....	3,436	15,530	3,781	17,421	10·3	...	4,038	6·7	...	18,570	6·7	...
N.-East	3,959	17,867	4,504	21,301	19·1	...	5,174	13·3	...	23,798	11·6	...
N.-West	2,337	10,909	2,693	12,370	15·6	...	3,441	27·7	...	15,464	26·1	...
West ...	3,475	16,616	4,331	20,176	21·4	...	4,906	15·9	...	24,530	21·5	...
South ...	1,273	6,210	1,363	6,677	7·5	...	1,502	10·2	...	7,358	11·6	...
North ...	2,711	13,001	2,828	14,454	11·1	...	2,891	2·3	...	15,744	8·9	...
Mill Hill	906	5,223	969	5,414	3·6	...	940	...	3·	5,170	...	13·9
Kirkgate	656	3,411	633	3,337	...	2·2	621	...	1·7	3,291	...	1·4
	18,743	88,466	21,061	101,060	14·2	...	23,513	11·6	...	113,945	12·7	...

by which we gather, that of late years, the tide of population in Leeds has steadily flowed towards improved ventilation and surface condition; since the increases in seven years from 1851 to 1858 in the West and North-west Wards exceed the per centage decennial increases of the ten years between 1841 and 1851.

There has been a gradual decrease in the number of inhabitants in the Mill Hill Ward, which is in the centre of the Town, and mainly composed of wide and well ventilated streets; but here the

population has given way to warehouses, shops, and offices. And in the Kirkgate Ward, there has also been a continued decrease which we can understand; for though it is also in the centre of the Town as it were, and mainly occupied by shops and warehouses, yet its dense courts and yards lie contiguous to a river, which, though a trout stream within the last seventy years, having footways clothed with avenues of trees, is now nothing but an open sewer, containing first, the sewerage of Bradford, a Borough ten miles away west, and nearly as large as Leeds; of Shipley, secondly, with a population of upwards of 4,000; and, lastly, of all the Mills, Houses, Dyehouses, Tanneries, and Workshops, which crowd its western banks, and cannot, therefore, be healthy or pleasant to those who have the means of removing elsewhere. We see, in fact, towards the less densely populated Wards a gradual movement made from the old localities, as well as a steady increase of a new population, evidencing an improved state of society, both socially and morally, and owing no doubt in part to the improvement in the condition of the streets which has been lately effected.

In 1838-39 and '40, as Councillor of the Borough, on a motion which I brought before the Corporation, I was entrusted with the task of statistically inquiring into its then general condition, and to report upon it; the necessity of which inquiry was perhaps more familiar to me than many, from having had large intercourse with the working classes, both medically and officially, for several years. That Report obtained an Improvement Act, by which a general system of sewerage was enforceable; and a Burial Act, by which Leeds was enabled to acquire new Cemeteries, at a distance from the living; and it is most gratifying to find, that by a comparative Return just made to me, of the Births and Deaths in the Registration Districts of Leeds Proper for 1851 and 1858, though the rate of mortality of the Town is still high as compared with the Country Districts round about, yet it is most materially lessened from what it formerly was, which, indeed, it needed to be; for by a Table of Deaths made under the same inquiry, the following results (D) appeared:—

(D.)—*Leeds, 1839-40.—Relative Longevity.*

Only 1 Male in	145 and 1 Female in	119 lived to be 70
1 "	536 " 1 "	343 " 75
1 "	677 " 1 "	471 " 80
1 "	10,471 " 1 "	2,689 " 85
1 "	13,961 " 1 "	5,081 " 90
1 "	20,942 lived to be 100.	

Also, that

Of 9 Gardeners	1 lived to be 70	Of 88 Linen Drapers 1 lived to be 70
31 Saddlers..... 1	"	168 Grocers 1
44 Labourers 1	"	187 Blacksmiths... 1
58 Charwomen 1	"	185 Butchers 1
58 Brickmakers 1	"	250 Cloth Dressers 1
59 Bricklayers 1	"	302 Flax Dressers -
61 Upholders 1	"	443 Clerks -
63 Bakers 1	"	557 Dress Makers -
75 Joiners 1	"	698 Mill Workers -
86 Cabinet Makers 1	"	

For Registration purposes, the Wards of the Town are divided into Districts, as follows; viz.:

1st. The North District, comprising the North and East Wards.

2nd. The West District, comprising the Mill Hill, West, and North-West Wards.

3rd. The South-East District, comprising the Kirkgate, South, and East Wards.

And when the sums of these Wards are added together, these Registrations stood thus in 1851, and stand in 1858 as follows:—

(E.)—*Leeds, 1851 and 1858.—Inhabited Houses and Population.*

Registrn. Dis. in Wards.	Acres.	Inhabited Houses.	Population.	Popln. to House.	Popln. to Acro.	Births to Popln.	Deaths to Popln.	Year.
North and North-East {	633	7,392	35,755	4·8	56·4	One in 24·7	One in 28·	1851
	633	8,065	38,542	4·7	60·8	24·4	35·	1858
Kirkgate, South and East {	812	5,776	27,435	4·7	33·	24·3	31·3	1851
	812	6,160	29,219	4·7	35·8	26·9	36·6	1858
Mill Hill, West North-West {	1,226	7,893	37,860	4·7	30·8	28·9	36·7	1851
	1,226	9,287	45,184	4·8	36·6	31·7	45·	1858

We thus see that in the North Districts, with an increased density of population upon the acre, the births to the population remaining the same, in the seven years from 1851 to 1858, the deaths decreased 25 per cent.

So also in the South-East District, with an increased population, the deaths decreased 16 per cent.; and, lastly, in the West District the diminution of deaths reached, as in the first instance, 25 per cent.

I know that in former years Infantile Deaths, half of which used to occur under five years of age, instead of eight, raised the mortality of Leeds Proper, most materially; but whether their health in particular is improved, or the general health makes the difference I cannot

exactly say; but as many children died formerly from being unable to sustain the insanitary influences of impure atmospheres, and still worse nursing from the crowded state of the dwellings, so I am led to believe that children's lives now add to the improved vitality of the original neighbourhood; at any rate, there can be no doubt of the improved healthiness of Leeds, for it is a fact notorious to the local Medical Profession; and it becomes, therefore, a question of considerable interest; for though much of this altered condition may be, and I believe is, attributable to the sewerage which has wisely threaded these dense populations first, yet other causes operating within the same period may have also tended to the same result; such, for instance, as compulsory vaccination, the decrease of cellar occupancies, migration to better ventilated districts, better regulations as to hours of work, improved wages, temperance societies, a higher social and intellectual state, or a better knowledge of the general laws of life, disseminated by lectures, cheap publications, and Institutes for mutual improvement; all of which remedial elements Leeds possesses in an eminent degree.

The importance of sanitary measures indeed, to such a Town as Leeds, can scarcely be overrated, when we are made aware, that 18 per cent. only of all its houses exceed 10*l.* annual rent; showing how large is the proportion of the working classes to the general population; and that the elevation of these workpeople in the scale of social life, depends mainly upon those sources which increase their self respect. For although their freedom from popular tumults depends greatly upon their diversified employments, few of which languish simultaneously, yet high wages always consequent on a demand for labour again consequent on diversified employment, within the same area, without moral control, have often produced in the Manufacturing Districts of England, outbreaks, expensive alike to individual as to the commonwealth.

III.—*Woollen, Worsted, Flax and Silk Trades.*

I have attempted to show already, in a general manner, the industrial occupations of the out-Townships. I shall now, by a reference to some of the larger Trades in the Town Proper, endeavour to give an idea of those which are predominant, and the wages which are distributed in them. I propose also to glance at the people's self-providence, and at the charities which assist them; and after all, I am afraid that social science has yet its great work to accomplish, viz., to teach the working classes that kind of economy, by which they would feel pauperism a degradation, and ignorance a crime; that by their own efforts they are able to become independent; and even themselves to assist in rendering ragged schools unnecessary, and the cost of reformatories, and of criminal prosecutions, comparatively insignificant.

There are certain Trades—all of which may be said to be staple in Leeds. These are the Woollen, Worsted, Flax, and Silk; Dyeing, Machine Making, Leather, Shoe, Paper, Tobacco, Sanitary Pipes and Fire Bricks, Glass, Earthenware, Glue and Chemicals, Coal, Stone, Railway Furnaces, and amongst the general Trades, Tailoring in particular, simply because large numbers of persons are employed in making garments for exportation.

I doubt whether the prevailing manufacture of Leeds at the present day is Woollen or Machinery. Both employ the people largely; and perhaps the largest amount, as well as the highest rate of wages, is paid to the skilled labourer in Metals. But the Woollen Manufacture has been so long known as the staple Trade in Leeds, that we must still give it the priority, though it has only been special to the West Riding since 1735. Although it has had much competition to contend with, it has maintained its hitherto fair fame, and at the present day is not degenerated when fine qualities are demanded. It is curious to refer to an Act passed in the reign of Henry VIII in favour of the City of York, which recites that the poor of that City were daily employed in spinning, dyeing, carding, weaving, &c., for the making of Coverlets; and that the same have not been made in the same County till of late. That this Manufacture has spread into other parts of the Country, and was thereby debased and discredited; and therefore it is enacted that none shall make Coverlets but the people of York.

And—once more—to the verses of the Poet Dryden, so long ago as 1666, in which he speaks of

“Some English wool vexed in a Belgian loom,
And into cloth of spongy softness made—
Did into France or colder Denmark roam,
To ruin with worse fame our staple trade.”

The Woollen Manufacture begins with the Stapler, who buys the Wool of the Farmer, and ends with the Merchant. It is divided into three principal processes, which are again subdivided.

First, there is what is called, The *Manufacturer*,
2ndly, The *Finisher*, and
3rdly, The *Rag Grinder*.

The first manufactures the Raw Material into Cloth.

The second finishes it, or gives it its appearance as it is ordinarily worn.

The third takes the manufacture of the two former processes when thrown aside by the wearer, cuts it into patches, which he forcibly tears asunder, and then remodels them into Raw Material again, to be again used by the first consumer.

And of so much consequence is this last process to the Trade,

that its machines in Leeds alone are capable in full work, of producing 3,605,760 lbs. of Raw Material in a year of 313 working days, or, upon the average of 9 lbs. to the Fleece, of adding to the annual stock of Wool the fleeces of upwards of 400,000 Sheep.

The following Table (F.) gives the details of the Woollen Trade in Leeds at present:—

(F.)—*Leeds.—Woollen Manufacture.—Extent, &c., in 1858.*

First Process.	Firms.	Nominal Horse Power.	First Process. Spindles.	Gigs.	Power Looms.	Rag Machines.	Total Persons Employed.
1st	68	1,936	8,640	....	952	....	3,636
2nd	48	860	....	860	....	....	6,209
3rd	12	128	....	....	....	16	348
	128	2,924	8,640	860	952	16	10,193

The Wages of these processes amount to as follows:—

Process.	Annually.	Weekly.	Per Person Weekly.	
1st Process—Manufacture....	£ 110,120	£ 2,118	s. 11	d. 7½
2nd „ Finishing	254,215	4,888	15	
3rd „ Rags	5,760	111	6	— ½
Total	370,095	7,117	10	— ½

I do not, however, trespass further upon this branch of industry, because Mr. Baines, our President, has entered so fully into the Woollen Trade of Leeds, that it would be quite superfluous. He has said everything which can be said about it, and by his statements, an idea can be formed of its importance to the welfare of our local population.

The *Worsted Trade* has very much declined within the Borough of Leeds of late years.

In 1855 there were 9 Mills, 9,716 Spindles, 655 Power Looms, employing 1,077 persons. At present there are not more than 4 Mills, about 120-horse power, and 10,000 Spindles, employing about 540 persons: so that there are a few more Spindles than there were in 1855, but about 369 Power Looms less—and hence the diminution in the number of persons employed. A few years ago, there were in Leeds many Stuff Merchants, carrying on a large business, buying goods principally at Bradford, and selling them at Leeds. But on a

sudden panic, during which they supposed that Bradford was about to absorb the whole Stuff Trade, and that customers would never again be seen in Leeds at all, they fled thither with great precipitancy, leaving the manufacturers only behind them, and who probably would have flown too, but for their Mills, which they could neither carry away nor dispose of.

There remains but to add to this Trade about 200 Hand Loom Worsted Weavers, who still carry on their vocation in Leeds, and who obtain a bare livelihood, in a competition with the Power Loom, which seems all but futile. These Weavers earn about 15*s.* a week, and swell the aggregate wages of the Worsteds Trade in the Borough to 20,238*l.* annually, 389*l.* 4*s.* weekly, or 10*s.* 5½*d.* per person. The Hand Loom Weavers of Leeds formerly amounted to a considerable number.

There is a large Silk Manufactory in Leeds which employs about 550 hands in manufacturing waste silk, at an average wage of about 350*l.* weekly, distributing annually 18,200*l.*, or 12*s.* 8½*d.* per person, but as there is only one Firm, it would be improper to mention it in further detail.

The Flax Trade is also staple to Leeds, and is only second to Belfast, in the United Kingdom.

In the Borough there are 32 Firms, employing 1818 nominal horse power, 9,020 persons of all ages, of whom 5,700 are women and girls, 149,454 Spindles, 352 Power Looms, and 340 Hand Looms.

The rate of wages of these persons varies somewhat according to their skill. An Overlooker gets 21*s.*, a general labourer, 15*s.*, Women, 6*s.* 6*d.*, Lads from 4*s.* 9*d.* to 5*s.* 6*d.*, Weavers from 10*s.* to 15*s.*, Mechanics 29*s.*, Enginemen, 29*s.*, weekly.

The Flax consumed in Leeds amounts annually to about 12,000 tons, obtained principally from France, Flanders, Holland, Ireland, the Baltic, and home growth. A considerable quantity of Tow is also consumed in Leeds, equal annually to about 3120 Tons. The production annually amounts to about 3,355,804 bundles of 60,000 yards to the bundle.

The improvements in Flax Machinery within the last ten years, have raised the rate of wages, and materially increased the quantity of production.

The gross Wages paid in the Borough of Leeds for the Manufacture of Flax amounts to, annually, 188,052*l.*; weekly, 3,616*l.*; or about 8*s.* per person.

Dyeing is, of course, an important trade, where the textile fabrics are so largely made; and it is one in which, in Leeds, great improvements have followed rapidly upon each other. The Wages vary according to skill—very skilled workmen receiving as much as 120*s.* a week.

The Dyers divide themselves into Woollen and Stuff Dyers. The former devote themselves to Woollen Cloths, the latter to Worsted or Stuff goods. The Woollen Dyers, including the hands engaged by the Manufacturers who dye their own goods, employ 812 persons of all ages, but no women. Their aggregate Wages amount to, annually, 14,352*l.*; weekly, 276*l.*; per person, 17*s.* 8½*d.*

The Stuff Dyers employ an aggregate number of persons amounting to 1,336, of whom 251 are lads, and 33 are females, whose aggregate Wages amount to, annually, 62,400*l.*; weekly, 1,200; per person, 17*s.* 11½*d.*

The aggregate sum of the Dyeing Trade in the Borough of Leeds is then as follows:—

Firms.	Horse-Power.	Persons Employed.	Annual Wages.	Weekly.	Per Person.
				£	s. d.
32	550	1,668	76,752	1,476	17 8

IV.—Iron and Machine-Making Trades.

The next most important Trade after the aggregate of the Textile Fabrics is that of Iron and the Metals generally—including in fact all branches, from smelting to the finished machine; and all the domestic work in it, if so it may be called, over the whole Borough.

There are employed:—

	Persons.
1st. In Flax and Tow Machine making, including men and lads	2,630
Men's wages varying from 25 <i>s.</i> to 28 <i>s.</i> weekly.	
2nd. In Tool Engineering and Machine Tool Making—men and lads	1,800
Men's wages varying from 26 <i>s.</i> to 30 <i>s.</i> weekly.	
These 1,800 persons turn out 12,800 tons of Tools alone, per annum.	
3rd. Engineers, Millwrights, and Boiler Makers, of whom 2,400 are employed in the manufacture of Locomotive Engines	4,140
Men's wages varying from 28 <i>s.</i> to 32 <i>s.</i> —Lads from 4 <i>s.</i> to 10 <i>s.</i> weekly.	
4th. In the various Smith's Shops, exclusive of those employed in Machine and Engineering Shops	450
Wages varying from 12 <i>s.</i> to 27 <i>s.</i> weekly.	
5th. In the manufacture of Bar, Plate, and other Malleable Iron	2,250
Wages varying from 25 <i>s.</i> to 31 <i>s.</i> weekly.	
Weight of Iron manufactured by these persons per annum, 59,800 tons.	
6th. In the various Jobbing Brass and Iron Foundries	350
Wages varying from 20 <i>s.</i> to 24 <i>s.</i> weekly.	
7th. In Hackle and Gill Manufacturing	230
Wages varying from 6 <i>s.</i> to 29 <i>s.</i> weekly.	

Thus the total number of Workers employed in the Manufacture of Metals within the Borough amounts to 12,110.

Their Annual Wages to 566,748*l.*—Weekly do. to 10,899*l.*—Per Person, 18*s.*

The rate of Wages amongst the ordinary workers in Iron has not varied very much for several years. It may have increased a little.

V.—Paper, Tobacco, and Pottery Trades.

The Paper Manufacture is of some importance with us. It employs 190 persons, of whom 80 are women, 200-horse power, consumes in rags and ropes 2,600 tons, and produces 1,560 tons of Paper annually.

The annual Wages amount to 7,280*l.*; weekly, 140*l.*; per person, 14*s.* 8½*d.*

In addition, the Paper-hanging Trade employs about 120 persons whose Wages I have not been able to ascertain.

The manufacture of Tobacco has long been staple to Leeds, large quantities being weekly produced. In 1857, there came into Leeds, 2,460,000 lbs. weight, the duty paid on which amounted to 387,450*l.*

There are nine Firms in the Town, who manufacture weekly about 46,400 lbs. The total number of persons employed amounts to 115; annual wages to 18,060*l.*; weekly wages, 347*l.*; per person, 26*s.* 11½*d.*

There is one feature peculiar to the Tobacco Trade which deserves notice, *i. e.*, that whilst the actual cost of the Tobacco amounts weekly to 9,280*l.*; it is sold when manufactured for 7,733*l.* 6*s.*, or at an apparent loss of 19*d.* per lb. to the Manufacturer.

When speaking of the out-Townships, Wortley was mentioned as being geologically of great interest to the Borough of Leeds, especially with reference to its Clay for sanitary pipes. This Clay has for 70 or 80 years, or perhaps long before that, been made into Fire Bricks for Blast Furnaces and other forge works, and found to be equal in quality to any Fire Clay in the Kingdom. This Clay was at the first got by diggers with the spade, where the bed cropped out; and a great portion of this was sold to the Tobacco-pipe Makers and Potters. For many years past, however, it has been obtained by sinking to a depth of about 50 yards.

The analysis of this Clay is as follows:—

Silica	60·
Alumina, faintly tinged with iron.....	35·5
Water.....	4·5
	<hr/>
	100·

It contains no lime whatever, and the proportion of Iron is so small that it may be neglected.

Dr. Ure thinks this Clay superior to that of Stourbridge for Fire Bricks, as it contains more Alumina, less Iron, and no Phosphate of Lime. Extensive works have lately sprung up for the manufacture of this Clay into Sanitary Pipes, Fire Bricks, and amongst other things into large Retorts for Gas Works, superseding even those of Iron.

The pipes made at Wortley have been used by the Town Council

for sewerage the Town of Leeds; and many are now made, socketted and glazed, of three and four feet in diameter.

The numbers of persons employed in this branch of manufacture within the Borough amounts to :—

Persons of all ages	900
Weekly wages	£775
Annual „	£40,300
Per person	17s. 2½d.

This bed of Clay varies from 18 to 30 inches in thickness; and a thin bed of Coal varying from 12 to 15 inches thick, is found laid upon it and got with it.

Connected with Clay is Earthenware, of which three sorts are rather largely made within the Borough, viz., White, Brown, and Black. The White is made with Clay from Dorsetshire; the Brown and Black with Clay found in the neighbourhood of Leeds.

The following persons are employed in this branch of labour :—

In White Earthenware	460 persons.
In Brown and Black.....	80 „
	<hr/>
	540

Of whom 113 are women and girls.

Their annual Wages amount to 13,842*l.*; weekly to 266*l.*; per person, 9*s.* 10½*d.*

Glass is also an article of considerable manufacture with us, and employs about 600 persons. There are several houses both for Crown and Bottle manufacture.

I am obliged to form an estimate of their Wages, on account of their varying so much, being for the most part piece work. It is as follows :—Persons employed, men and lads, 600; annual Wages, 35,360*l.*; weekly, 680; per person, 22*s.* 8*d.*

VI.—*Chemical and Coal Trades.*

The manufacture of Chemicals, where so much Dyeing is carried on, cannot be overlooked. In Leeds—Refined Indigo, Preparations of Indigo, Liquid Ammonia, Soaps of various kinds, Oil of Vitriol, Nitric and Muriatic Acids, Dyer's Spirits, Cudbear and Archill, Prussiate of Potash, Bichromate of Potash, Soda and Soda Ash, Copperas, Sulphate of Ammonia, Alum and other Chemicals sold by Druggists are all manufactured.

The total Horse-power employed is estimated at	400
Persons of all ages.....	520
Annual Wages	£32,240
Per person	26 <i>s.</i>

It is to be regretted, that in Leeds we do not give to our home Manufacturing Chemists all the employment we might do. It is estimated that only a tithe of the Soda Crystals, Soda Ash, Soap,

Alum, and Bichromate of Potash, used in and around Leeds, is bought at home, though equal in quality with that which comes in from other places, and the cause of this neglect of home produce is not unworthy of consideration. Does it arise from a want of enterprise on the part of the Chemists themselves engaged in the manufacture of these articles, or to an unwillingness on the part of the consumers to encourage local industry? This encouragement, however, ought to be afforded, since the success of Manufacturing Chemists as a branch of trade in Leeds is necessary to the completion of nearly all the manufacturing operations of the district.

The Oil Trade, though it does not employ so many persons, is yet a very important branch of our local industry. It may generally be considered to be in full work only for seven months in the year, and during that time the presses of Leeds will consume 9,820 quarters of Linseed and 38,080 quarters of Rape Seed, producing 123,760 gallons of Linseed Oil, and 723,520 gallons of Rape Oil.

It employs about 242 persons, men and lads, whose annual Wages amount to 12,584*l.*; weekly, 242*l.*; per person, 20*s.*

Employment on the Railway Termini is equivalent with us to a Manufacture, since it gives large wages to a numerous body of Employés. We cannot but remember how seriously Railways were expected to displace labour, and yet the Termini in Leeds alone give employment to 1,016 persons, whose annual Wages amount to 55,620*l.*; weekly, to 1,069*l.*; per person, 1*l.* 1*s.* 0*½d.* Added to this is the manufacture of Railway Trucks and Wheels, in which employment, exclusive of that before given under the head of Iron, are the following persons, viz. :—men and lads, 475; annual Wages, 20,800*l.*; weekly wages, 400*l.*; per person, 16*s.* 11*d.*

The Coal and Iron Miners within the Borough are estimated at 2,000.

Some idea of the quantity of Coal consumed in Leeds Proper may be formed, when the following facts are taken into consideration :—

In Mills and Workshops there are 150 Engines—Horse-power 3,950				
Dye-Houses	„	32	„	550
Miscellaneous.....	„	74	„	1,040
Total				5,540

Total Coal required and consumed by these—

	Tons.
Engines, annually.....	277,335
Smelting purposes	195,000
House Coal	189,104
Miscellaneous Coal	15,000
Total	676,439

Lastly, there are the Stone and Leather Trades, and the Shoe Making and Tailoring Trades, all of which are deserving of special notice.

I have not, however, been able to obtain a return of the Stone Trade.

There are several establishments in the Leather Trade, one of which is able to produce 20,000 Sheep, Goat, and Calf Skins weekly, for the purpose of hat linings, covering books and furniture, and for Chamois Leather; another in which 700 hides and 900 skins are tanned weekly; and two others which operate upon about 4,000 skins weekly. Their aggregate Wages may be estimated at 1,000*l.* a week, for about 1,200 persons.

Estimated, because many come into Leeds to work and many go out into the neighbourhood, of the 2,000, 600 may be lads. Their weekly Wages will amount to 1,967*l.*; annually to 102,317*l.*; per person, 19*s.* 8*d.*

In the two trades of Tailoring and Shoemaking about 4,500 hands are employed, averaging weekly about 12*s.* They might earn a great deal more, but they will scarcely work two-thirds time. Yet in Leeds alone 15,000 pairs of boots and shoes are made weekly, and are preferentially sent to every part of the known world, and in many places bespoken before they arrive.

If then we take the present population of the Borough at 190,693, and half of these as females, there is thus accounted for 45,829 persons, or nearly a fourth, including all ages, who receive annually 1,752,689*l.*—or weekly, 33,734*l.* 9*s.* 4*d.*—amongst them. The residual employment is made up of those Trades which are common to all congregated populations whose varied wants have to be supplied. With the exception of Joiners, Masons, Bricklayers, Sawyers, Drapers, Milliners, Butchers, Grocers, Warehousemen, and a few others, there are no Trades else in which 100 persons are engaged.

VII.—*Conclusion.*

The poverty or providence of the whole, taking the mixed character of the population into consideration, is a subject of deep interest.

We test the former by the books of the Guardians of the Poor, and by the various Charities of the Town, Medical and otherwise; the latter, by the deposits in the Savings' Banks and in the Building Societies—and by the amount of Income raised and expended by the Secret Orders among themselves.

In 1857, there were relieved out of the rates—

Men.	Women.	Children.	Vagrants.	Total.
2,238	4,862	5,653	4,684	= 17,437

The Indoor Vagrants, it is true, exceeded the Indoor indigenous Poor by 163 per cent. ; but if we subtract these vagrants from the home poor in the aggregate, there remained, amid all these varied and mixed employments, and with this large distribution of wages, 12,753 persons who were assisted out of the savings of the industrious—notwithstanding all charity—notwithstanding that the Secret Orders raised and distributed among their sick and distressed brethren 20,000*l.*—and notwithstanding an increase of depositors in the Savings' Banks within the last eight years of 8,600, and of deposits of 53,091*l.*, but these 12,753 cases were perhaps not all individual paupers, but individual applications for relief.

To my mind, this pauperism is the result of sheer improvidence ; and as co-existent with varied and consequent choice of employment, and high wages, it will have to be early dealt with by social science. Its causes are already in process of development ; but its elements are so commingled with questions of public policy, that the greatest care will be required in touching upon them, lest feelings of suspicion are awakened, and jealousies of interference aroused, which it might be difficult to allay.

Two great causes certainly, of this state of things, which in the end affects all our interests, are—

1st. The ignorance which exists among the working classes with reference to social virtues ; and

2ndly. The ease with which the pockets of the rate payers can be dipped into by the rate collector.

Many of our women, as yet, do not sufficiently comprehend home attractions and self-respect, and they are therefore not appreciated by the men. For years, these have been lost in the mammon of universal labour—and its enjoyments falsely so called—which have left nothing but regret behind them.

The day is dawning, however, when with its general principles, departmental education will be taught the men ; and if it is necessary that women and children should be employed in congregations, the little good and the great bad thrown into one common assembly, arrangements will have to be made, whereby they will meet under a more domestic system of supervision and control than they have hitherto done, so that morality may be a lesson cultivated simultaneously with labour, and as a people we may be wiser and better for our abundant benefits.

On the RECENT HISTORY of the CRÉDIT MOBILIER.

By WILLIAM NEWMARCH.

[Section F, Economic Science and Statistics, of the British Association for the Advancement of Science, at Leeds, Tuesday, 28th September, 1858.]

OF the verbal statement made by Mr. Newmarch on the subject stated above, the following Report is obtained from the notes of the Short-hand writer:—

THERE was established in France, in 1852, a Society of a very extraordinary character, which, taking the name of the Société Générale de Crédit Mobilier, has not failed to occupy a considerable share of attention during the period of nearly six years it has been in operation. Most persons who have at all had their attention directed to French Finance, cannot have failed to have been struck, from time to time during those six years, with the statements made, and the results put forward, in connection with the experience of this new Society. Two years ago, at the Meeting of this Association, at Cheltenham, I submitted to this Section an analysis of the principles upon which the Society was constituted, and of the results obtained up to that time; and I ventured to say, notwithstanding the brilliant results achieved down to the close of 1855, that there were so many fundamental and grave errors connected with the whole of the system upon which the Society was founded, that no long time could elapse before serious mischief might be apprehended. I think that I shall now be able to show to the Section good reasons for believing that the statement thus made two years ago, was a statement made upon reasonable foundation.

First, as regards the Crédit Mobilier itself. Let me state a few particulars, for the convenience of those who may not have the facts readily in their remembrance. The Society was constituted in November, 1852. It was a Joint Stock Company, *en commandité*, or upon the principle of limited liability; the capital being 2,400,000*l.*, in shares of 20*l.* each. As to the sphere to be filled by the Society, without attempting to read to you the elaborate array of objects set forth in the Prospectus—or to go through the statutes which constitute the foundation or Charter—I may state that the operations of the Society are directed principally into three fields. First of all, the Crédit Mobilier is a Society intended to carry on all kinds of trading operations—a Society for making railways, contracting loans, managing omnibus and gas companies—in fact, a universal Trading Association. Secondly, it is a Society for buy-

ing up existing Trading Societies and Companies, so far as negotiations can be completed for that purpose; and it is, thirdly, a universal Banking and Brokerage Company, professing itself ready to make advances upon the Stock Exchange, and to enter generally into all the operations which, in this country, we understand to be connected with the administration of a Bank, the business of a Bill Broker, or the business of a Broker in the ordinary acceptation of the term.

The funds which are necessary for carrying on these great and diverse operations, were to be obtained in three modes. First, by the capital of the Society itself, amounting, as I have said, to 2,400,000*l.*; secondly, by deposits taken by the Society from the public; and, thirdly—although this part of the plan was not carried into effect—by the emission by the Society of a new kind of circulating paper—meant to be something between the present bank note convertible into specie upon demand, and a kind of obligation not convertible at all. It was this last part of the constitution of the Society to which I directed particular attention in 1856. According to the statutes, it was provided that a sum of not less than 24,000,000*l.* sterling should be raised by the emission of this class of small circulating notes; the notes themselves bearing interest from day to day (corresponding in that respect closely to our Exchequer Bills) drawn for small amounts, and intended to be issued by the Society in the discount of bills of exchange, or other negotiable instruments. The view was—(and there can be no mistake as to this part of the case, for it is laid down in unmistakable language in the official programme)—that the credit of the Society should be exchanged against the credit of merchants, and at rates of interest more reasonable than were charged at the time by the ordinary Banks; that, for instance, while the rate of discount of the ordinary Banks might be 5 per cent., the rate of the *Crédit Mobilier* should be 3 per cent.; and it is laid down very clearly in the programme, that by a contrivance of this nature, the greatest possible advantages would be conferred upon industry; that it would be wholly impossible, under such a system, that commercial panics or crises could arise; that the credit of the Society would be so great, its ramifications so extensive, that whereas, under former systems, in periods of panic, Banks rather aggravated the evil than otherwise, the *Crédit Mobilier*, by the happy device of the issue of these obligations, would prevent the occurrence of inconvenience or disagreeable necessity. This is a statement fully borne out by the following extract from the published official documents of the 23rd November, 1852:—

“The superiority of the constitution of the Society General consists in the scheme which it includes for the *emission of Obligations at Long Term* in such a manner that the repayment of the Obligations will proceed, *pari passu*, with the

redemption of the Shares and Bonds which the Society will hold in its portfolio. * * *The Society General will have, consequently, nothing to fear from political, industrial, or commercial crises.* On the contrary, we may affirm that it is at those conjunctures when it will be able to render the greatest services: for being the representative of a considerable number of enterprises, the character of a Company of Assurance, which it presents, will secure to its Obligations preferences over all other particular investments. The Society General will perform the office of an intermediate between Capitalists and Industry. * * It will put an end to the onerous conditions commonly exacted at present for definitive investments in Industry."

Down to the close of 1855, the position of the Society was somewhat as follows:—It had its paid-up capital of 2,400,000*l.* It had obtained funds, in the form of deposits, to the amount of more than 4,000,000*l.* So that its available means may be taken at above six millions sterling. It had invested about four millions in the French funds, railway shares, and the like; about a million and a third were in bonds of various sorts; and the Society was employing in trading purposes about two millions of its capital. So long as the state of the French Stock Exchange allowed large profits to be made by speculations in the funds—so long as there was something like a continuous rise in those funds—nothing could be more prosperous, or apparently more free from all hazard, than this extraordinary undertaking. At the close of 1855, a profit was shown amounting to 50 per cent. upon the paid-up capital: and an actual division took place at about that rate. It was with these facts before us as to what had been the results up to the end of 1855, that my statement in 1856 was made: and it was the object of that statement to point out that the principles upon which the Society was founded, and the manner in which these large profits were realized, were such as to justify the strongest suspicion that the time could not be far distant when it would be proved that those principles were utterly fallacious, and that this extraordinary success could not continue.

The results of the last two years have gone a long way towards the fulfilment of those apprehensions.. The profit announced at the close of 1856 was barely more than half that of 1855; and the profit at the close of 1857 was scarcely more than a third of the profit of 1856. In point of fact, during the last two years the *Crédit Mobilier* has found itself compelled, by the force of circumstances, to observe exactly the same course in its operations, and to admit exactly the same results in its experience, as in all former times have attended such experiments conducted on such a scale. So long as the *furor* of speculation in France was maintained at fever point, so long as the prices of securities on the Bourse continued to advance, the experience of the *Crédit Mobilier* was precisely that of sharebrokers and others in this country in 1844-5; and so long as large amounts of capital were continually impelled into these dealings, it was comparatively easy

for a great Society, supported as this is by nearly all the great men—I am sorry to say it—connected with the French finances, to make extraordinary profits; especially bearing in mind that one great source of profit consisted in making advances on stocks and shares, *en rapport*, that is, by means of the arrangement or system known in this country as “continuations,” or the continuing of large masses of shares from one account or settling to another, and charging a high rate of interest, and a handsome commission. In all great centres of speculation, a large business is done in these “continuations.” Persons having command of money can always be found to advance within a certain margin of the value of the stocks or shares to be carried over, charging a handsome rate of interest to protect themselves in the transaction. This class of business was prescribed at the outset as one of the fundamental peculiarities of the Society. The Society was set up to make large profits, by enabling speculators to carry over quantities of stock from one account to another.

During the last two years, we have it on the evidence of the Society's own Reports, that the difficulties which many persons foresaw, even from the foundation of the institution, have begun rapidly to accumulate around its managers. The enormous extent to which the Society has committed itself to all kinds of plans and undertakings from its outset—the enormous accumulation of obligations and liabilities of various kinds—has not failed to bring corresponding embarrassments. At the close of 1856, the Society claimed to itself credit for having entered into obligations and made itself responsible for the carrying out of undertakings, a bare enumeration of which is enough to create astonishment in the minds of those most accustomed to contemplate the liabilities of great enterprises. We are told that the Society had erected the Western Railway Company by the buying-up and consolidation of several old Companies, and by guaranteeing a million sterling of bonds required by the new Company. It had extended similar advantages to the Southern and Eastern Railway Companies. The operations on the Dole and Salins line had been suspended, and the Society had ensured the completion of the works by advances and by purchasing 16,000 bonds. To the Austrian Railway the Society had advanced three and a third millions sterling; it had become largely interested in the Ardennes lines; it undertook lines upon an extensive scale in the Pyrenean Department; it gave credit largely to two Swiss railways; it became mixed up with a railway in Spain; it undertook canals; it bought up all the omnibuses in Paris, and established a General Omnibus Association; it started a General Maritime Association, by purchasing sixty vessels, sailers and steamers: it bought up all the Gas Companies in Paris, and brought out a Central Gas Company; and

considerable progress was made in buying up a number of Salt Works in the South of France.

It is scarcely credible, that as a matter of business, a Society possessing the command of large *bond fide* funds, should be found in a country like France, committing itself to a category of obligations such as this : and when we were assured, in connection with such a policy, and apparently upon no mean authority, that a great discovery had been made in finance—that theretofore mankind had been entirely in the dark—merely in the infancy of experience in matters of ordinary business—that we ought not to leave each man to exercise his own prudence in the prosecution of his own interests, but that the only certain and speedy way of accomplishing great results was by means of a vast joint stock combination, which like this *Crédit Mobilier*, should assume to itself almost the attributes and functions of Omnipotence :—when, I say, we heard of this new philosophy, people here might well hesitate before adopting such doctrines, opposed, as they are, to all that is most firmly established in the regions of political economy.

And, indeed, during the last two years, the experience of this great Society has confirmed very much more the predictions of its critics than the anticipations of its promoters. For the Society has found itself compelled, in its last two Reports to admit—in language which, as time has advanced, has become plainer and more specific—that these Railways, these Gas Companies and Omnibus Companies, these lines of Postal Communication, these Steam Packets, these obligations in Switzerland, Spain, Austria, and Russia—had not turned out quite so successful as was expected. The Report to the close of 1856 was by no means a satisfactory document. It was suggestive of a great deal that was doubtful and mysterious as regarded the future, and as to the then actual condition of the Society. The effect was immediately seen in the price of the shares in Paris ; for instead of remaining (the 20*l.* paid-up) at 70 or 80*l.* they fell to something like 30*l.* The price remained very much depressed during the whole of last year. There has recently been a partial recovery, but not to any extent ; and the price is now a little over 30*l.* At the close of 1857, the managers had again to put forth a Report. One of the peculiarities of these Reports, is that they are of great length, and that a large amount of fine writing is indulged in. Instead of a clear statement of profit and loss being set out, and a specific description given of the actual state of the manifold undertakings, we find ourselves travelling through paragraphs, the meaning of which is by no means clear when we reach the end. But at all events we discover this simple fact, namely, that at the close of 1857, the Society found itself compelled to forego the declaration of any dividend. The meeting took place in April of

this year. It is attempted to be shown on the face of the Report, that on the preceding 31st December there was a balance in favour of the concern, assuming a certain mode of valuation as to the investments in those multifarious modes I have indicated. But the Report was also compelled to admit, that taking into account the enormous depreciation between December and April last, the whole apparent surplus has been swept away; that no dividend, in any proper sense, could be declared; and that the prospects for 1858 were not particularly encouraging.

Such is the result of this extraordinary and most marvellous experiment. There have been, and I believe there are, in Paris, very strong reports that the Society is so much damaged and shaken in its most vital interests, that it can scarcely hope to maintain much longer a separate existence; and that some means must be found of winding up, or of placing it in conjunction, in some way or other, with the Bank of France, upon which it has so largely depended from its commencement.

It would be easy for me to go into larger detail but it is scarcely necessary that I should do so. The general result is sufficiently indicated in the tenor of the Report of last year. For if there is one thing that may be regarded as at all certain, it is this—that there has been such a degree of boldness displayed in the management from the beginning, that if it had been by any means possible to put forth at the close of 1857 a better account than was put forth—any means consistent with facts which are perfectly notorious, of presenting a better result as to profit and loss, assets and liabilities—such a statement would not have failed to make its appearance.

By way, however, of conveying to the Section a more specific idea of the operations of the Society, I may state the amount of gross profit set forth in the Reports as arising upon the four leading divisions of those operations. The profits on stocks, shares, and bonds—which, so far as the Reports can be understood, seem to imply the profits made by buying on the one hand and selling on the other, and *vice versa*—amounted, in 1855, to no less than 1,040,000*l.* sterling; but in 1856, this profit had fallen to 457,000*l.*: and in 1857, to 180,000*l.* The significance of the fall under this head was thus referred to in the Report published last April:—"The diminution
" in the amount which we here mention, is not a fact peculiar
" to our establishment. The observation may be made more
" general. A reduction in this kind of investment particularly
" characterizes the situation of the market. It indicates a profound change in the direction of speculation, and is a sign of
" discouragement and mistrust for the future." A remark in which, I fancy we shall all be very much inclined to concur. And it is added, that "instead of operating in hopes of a rise, speculators have

"almost constantly done the contrary." As regards the second head—Profits on Commission and Interest: in 1855, the amount was 57,000*l.*; 1856, something near the same; but in 1857, it was only 28,000*l.*. The third head—Continuations: in 1855, 55,000*l.*; 1856, 171,000*l.*; 1857, 27,000*l.* "Interest on investments"—meaning, I suppose, on the Railways, Gas Companies, and so forth—is put down at 121,000*l.* for 1855; but I am sorry to say, for the sake of the shareholders, that no item under this head appears in the Reports for the last two years.

In looking at the history of the *Crédit Mobilier* during the six years it has been in operation, it is impossible not to be struck with the extraordinary state of things which has allowed the growth, and the continuance even for the space of six years, of an institution in itself so exceedingly anomalous—of an institution declaring itself to be almost entirely at variance with all that has been established by reasoning and experiment to be sound and right in institutions of this kind. It was declared as the purpose of the Society from the beginning, that by the application of Credit upon the vastest scale, new and magnificent results should be obtained. But, as a matter of fact, when we look closely into the circumstances of the case, we find that the entire concern is simply a large stock-jobbing association. Leaving wholly out of view, as a separate question, the gigantic and mischievous effects which must have followed from the emission by the Society of 24 millions worth of inconvertible paper, the history of the *Crédit Mobilier* from the beginning to the present time resolves itself into this—that some ten or fifteen persons largely concerned in business on the Paris Bourse have had sufficient influence with the Emperor to induce him to grant them a Charter overflowing with extravagant concessions. Under this Charter they set up this new Society, putting forth in its behalf the most startling pretensions, and claiming to have embodied in its constitution new discoveries in those departments of finance which are the best understood. An experience of six years, however, has amply sufficed to explode the new financial philosophy, and to exhibit the great device in all its natural simplicity of a vast stock-jobbing company. Largely concerned on the Bourse, the promoters of the *Crédit Mobilier* thought they saw their interest in extending their operations: for it is one of the earliest articles of the Society, that whereas the Bank would advance only as far as two-thirds of the value of stocks or shares, the *Crédit Mobilier* would advance to the whole amount, and carry on the speculation from one account to another. The Society's own Reports prove that it is simply a stock-jobbing association: as its own figures prove that the great result of 1855, in regard to profit, was obtained entirely by the margin of price in dealing backwards and forwards with shares and stock. During the last two years, the

bow has been stretched to the utmost; and we find the *Crédit Mobilier*, despite the highest patronage, the boldest management, the choicest opportunities, and the newest financial illumination—despite also the clear and distinct declaration in 1852, that this Society, for the first time in the history of financial projects, would be an institution *not* to be affected by political, social, or commercial convulsions—we find this great concern, supported by persons who, for some reason or other, are supposed to be high authorities in finance; supported, too, by the whole force of the French Government—we find it gradually crumbling away; principle failing after principle, one mode of practice abandoned after another, this investment and that rapidly giving way, till at the present time there is good reason to believe that it is in the last stages of its existence.

But it may be, and it has been, said by those who take a more favourable view of the principles and the operations of the *Crédit Mobilier*, "How do you account for the apparent ease and success with which the general finances of France have been conducted during the last five or six years? How do you account for the circumstance that during that period France has been notoriously expending large sums, many of them in modes wholly unprofitable, most of them certainly in modes which do not yield any adequate revenue?" If we take, for example, the embellishment of the Capital, the expenditure in that direction has been enormous, and there has been enormous expenditure as we know, for six or seven years, on Railways. There is very good reason to believe, that the expenditure in France on railways—actual expenditure in labour and materials—during the last five or six years has not been far short of 30 millions sterling per annum. We know that in this country, during the six years following 1845, taking the average, we certainly did not spend more than thirty millions a year on our railways; and most of us can remember the severe strain which that expenditure imposed. It is a fair subject of inquiry then, how it is that in France during the last five or six years, with the Russian War on their hands, with a failure of the silk crop, and on two occasions of the harvest, this enormous amount of activity was kept up. I dare say there are persons who are disposed to think that this *Crédit Mobilier*—this combination of stock-jobbers for their own aggrandizement, and for purposes which I believe to be entirely and wholly mischievous—has had some considerable share in producing these large and positive results. I believe, however, that there is not the smallest ground for such an opinion. I believe that so far from being of any service in really sustaining credit, or in finding employment for labour, in Paris or the provinces, the *Société Générale* has been a positive source of mischief. I believe that it has had no more to do with producing the beneficial state of employment in France during the last five or

six years, than had the snow which last year melted upon those Pyrenean Mountains in the midst of which the Society is now, very unwisely, spending its money in making railways.

I will tell you why this state of employment has prevailed in France. If any body will have the curiosity to examine the returns of the trade of France, whether as given by the official papers of the French Custom-house, or in some more indirect mode, he will find this startling result—that, since 1845, the balance of trade in favour of France has been very much more than 100 millions sterling. How and where has that great demand for French produce arisen? Chiefly in the United States and Australia—in the gold countries. And the simple answer to the whole of the difficulty is, that the state of things in France, whether political, commercial, or social, since 1851, has not been maintained by devices like the *Crédit Mobilier*, not by political devices, upon which, here, I desire to say nothing, but by the operation of this strong and natural cause—by the vast and increasing amount of French industry set in motion, and sustained year by year, by the new and sudden demand for French products which has grown up in the gold countries; and shortly, it is the payment for that produce which has furnished the means by which those great effects on French Industry already adverted to have been brought about. Look at the last return from our own Board of Trade, and what do we find as the declared value of imports from France during the first half of this year, '58? Why, that the imports were more than seven millions sterling, while the declared value of our exports to France was not more than two millions sterling. How has the five millions worth of produce been paid for? By sending to France the gold we receive from the United States and Australia: and this same process has been in operation from the beginning of the exploration of those new gold fields. The directness and simplicity of the manner in which this result has been brought about by the action of a single cause is surely one of the most remarkable of existing phenomena, and it is another illustration of the profound and extensive changes that are being produced upon the whole of the commercial countries of the world, by the discoveries of the new gold.

One general conclusion may at least be suggested. We see, I think, in the history of this great undertaking—and we shall see it more clearly as facts become more accessible year by year, and as we know more of its secret history—we see in this great, marvellous, and pretentious Company, an instance of the complete powerlessness for good—and I may say of the uncontrollable tendency to mischief—of all devices which aim at accomplishing large results by other than the honestest and most straightforward means. The *Crédit Mobilier* set out with a loud and confident boast that by means of

credit under some new combinations—by some devices which should relieve men from the necessity of thoroughly understanding their own affairs—some contrivance for dispensing with individual labour and self-denial—something to accomplish something by means which nobody could clearly understand—great effects were to be produced. We have had six years' experience, and we now see the result. Depend upon it, whether you examine into the history of institutions of this kind in France, or elsewhere—in our own or in former times—you will arrive at the same conclusion, viz.: That the only mode in which a nation can increase its material wealth is by relying entirely upon the industry and intelligence of its citizens. There is no more a royal road to wealth, than there is a royal road to knowledge; and any community, large or small, which expects that it can add to its material wealth, or to its material greatness, by devices which do not rest upon this solid and sure foundation, has committed itself to an error, the results of which cannot be foreseen by the wisest. Whatever may have been the advantages of soil, or climate, or geographical position possessed by a country, you will invariably find that in the severest trials through which it may have passed, the resource upon which it has relied with most success has been the industry and devotion of the great body of its people.

In our own case, so long as we cultivate to the utmost attainable limit the moral habits and the intelligent minds of our people, we may, with great composure, commit all such experiments as the *Crédit Mobilier* to the enterprise of others, well knowing that there lies latent in the common people of this country, waiting only for the stimulant of education, a depth of skill and invention far exceeding, even as a means towards material wealth, the imagined results of any device which ever turned the head of a speculator—a fund of wealth far exceeding anything which can be discovered in remote parts of the world. So long as on this side the Channel we are influenced by these views, we may safely content ourselves by seeking, not for a part, but for the whole community, a prosperity and progress, resting upon religion, sustained by freedom, invigorated by industry, and befitting a people trained to prize the highest rewards of more than one world.

Notes on INDIAN FIBRES illustrated by Prepared Specimens. By
MR. J. H. SADLER. Communicated by COLONEL SYKES.

[Read before Section (F.) Economic Science and Statistics, of the British Association for the Advancement of Science, at Leeds, 28th September, 1858.]

I WAS not aware when I mentioned to the Section the existence at the India House of many new India Fibres that some of them were given to Mr. Sadler for manipulation, and I am now glad to exhibit them with the following notes:—

The natives of India were at an early period acquainted with the art of spinning and weaving, and described as weaving cloth made of fibres from trees more beautiful than from sheep's wool; and in the institutes of Menu, written before the Christian era, we learn, that the sacrificial thread of a Brahmin must be made of cotton; that of a Chatriya, of Sana thread only; that of a Vaisya, of woollen thread. It is supposed, that the Sana thread was most probably that of the Sunn (*Crotolaria Juncea*).—Buddha, in his sermons preached 600 years before Christ, interdicted to women the use of certain mualins because they were too fine for decent concealment.

The Ambaree (*Hibiscus Cannibinus*) or Mesta plant of Bengal and Palungo of Madras and Ambaree of Western India, is very generally cultivated all over India; it grows from three to seven feet in height, the stem straight and simple, it is usually called Indian Hemp or one of the Brown Hems of Bombay.

Bandikai of Madras, and Bendy of Bombay (*Hibiscus Longifolia*), grows to a great height and very straight, with a few branches, and with pyramidal pods, which when young are filled with a large proportion of mucilage, and are gathered and cooked as a vegetable; the fruit is also used to thicken soups, and the seeds added like Barley to it; they may be also roasted as a substitute for Coffee.

The Deckanee Hemp, Ambaree, grows with a straight clear stem from four to seven feet in height; its leaves are in general used as an esculent vegetable by the natives, and taste something like sorrel.

Rouselle (*Hibiscus Sabdariffa*) is cultivated in most gardens, because its calyxes as they ripen become fleshy, and are of a pleasant acid taste, and are employed for making tarts, as well as an excellent jelly.

Marool of Madras, or Bowstring Hemp (*Sansevieria*), the leaves when cultivated are from three to four feet long; the fibre extends their whole length; from these fibres the ancient Hindoos made a very tough elastic thread, of which they made their bowstrings.

The Naroo and the Naroo T fibres being both new ones, no description is yet given, except that they are natives of Malabar.

The Bunochra (*Urena Labata*), and the Kungio (*Urena Sinuata*), are from two weeds common in most parts of India.

The Mudar, or Mudder, is met with in both the southern as well as the northern parts of India, in considerable quantities in all uncultivated lands, and encroaches even on cultivated grounds. It is a plant with broad, fleshy, glaucous-coloured leaves, and which, when pierced, gives out a milky juice from every part; this is called Ak and Mudar in Northern, and Yercum in Southern India. It is the *Asclepias Gigantea* of Botanists. Its juice and the powdered bark of its roots are employed medicinally by the natives of India in cases of leprosy and other cutaneous affections; lately its milky juice has been collected by making incisions into the plant, and preparing it as a substitute for Caoutchouc and Gutta Percha.

The Pods of the Mudar are full of a beautiful glossy silk down, which the natives spin into a beautiful soft thread; from intimation given, this article will soon come into great use in the trade of this town (Leeds). The native mode of separating the fibres of the Mudar is tedious, rude, and injurious; notwithstanding it is one of the strongest fibres known, as, from experiments made by Dr. Wight, it bore 552 lb., when *Crotolaria Juncea* bore only 404 lb., and a small cord bore 3 cwt., without showing the least symptom of distress; yet by the samples now produced it certainly seems better adapted for purposes of Flax than Hemp, and well will it be for both housewives and servants if ever it should be brought into general domestic use instead of Flax, for common washing with soap and water will bleach the fibre a perfect white, beautiful and glossy.

The *Bromelia Ananas*, and *Bromelia Pigna*, also the Curratow fibres, are all of the different qualities of *Bromeliaceæ*, or the Pine Apple tribe. It appears the Pine Apple was first introduced into India by the Portuguese, it has now become so naturalized as to appear indigenous; it grows in enormous quantities in various parts of India; indeed so plentiful that a boat load of the fruit has been sold for one rupee, or two shillings, at Sincapoor and Malacca.

The *Perida Fatida*, or the Vegetable Silk; there can be no doubt but that this extraordinarily beautiful article will ere long enter largely into every description of ladies' wear.

The Neilgherry Nettle (*Urtica Heterophylla*), or the Vegetable Wool: indeed so greatly does this Wool resemble the Sheep's Wool, as to deceive some of the best judges in England.

The fibre is long in staple and by the two stricks now shown, and which were hackled by the Messrs. Marshalls and Messrs. Hives and Atkinson, proof is afforded how well it is adapted for Flax Spinning Machinery, and when Flax Spinners shall provide warps of this material cotton warps might be dispensed with, and a warp of great strength, be introduced, which so corresponds with all the essentials of real wool, that when mixed with wool, they will both take the same dyes, mill and dress together, and will certainly manufacture a good Cloth.

The Flax of India, according to Dr. Roxburgh, is mostly cultivated on account of its seed, and the part which in most other countries is most valued, is there thrown away. The Belfast Chamber of Commerce observes, that as India annually exports nearly 100,000 quarters of seed to Great Britain and Ireland, it has been calculated, that the plants producing this quantity of seed, would yield annually at the least 12,000 tons of fibre, value say 500,000*l.*, all of which now goes to waste. There can be no doubt, therefore, that the question is one of immense importance not only to this country, which requires such immense quantities of Flax fibre; but to India, which produces such enormous supplies of seeds, and is supposed to waste so much of valuable exportable material. There can be no doubt that the very best Flax may be produced in India, and always at a remunerating price, for labour there is so plentiful and cheap, that whatever may be the extent of cultivation entered into, there need be no fear of being undersold by any nation upon earth. It has been said, that if any party in India could supply this Kingdom with 100,000 tons of India Flax at this time, he might go on shipping as fast as he could, and never feel the least fear of overstocking the market. Instructions have been given for a considerable supply of four of the different India fibres.

The Silk of the Wild Silk Worm ought to be noticed, as the fibre, or thread, is fifteen times stronger than that of the common silk. No doubt it will be of importance to Manufacturers of what is called Spun Silk, as by proper looking after, an immense quantity, now completely neglected, might be collected and brought to be of great advantage to them.

The above is from information not collected by myself, but to the accuracy of which I can bear testimony from personal knowledge. India produces some 200 varieties of fibres for examination, and it is to be hoped for future use in Europe. The India House Museum contains specimens, not only of these, but of every article of raw and cultivated produce of India; Minerals, Gums, Dyes, Woods, and Cereals, and specimens of all the textile fabrics and works of art and taste; the whole are open to the inspection of the public, and manufacturers can obtain any desired information upon application.

In closing these notices it would be unjust to Mr. Dickson of Leeds not to state that the subject has engaged his earnest attention; and that he has a case of prepared Indian Fibres in the Exhibition of local Industry.

I have called the attention of the Section only to such fibres as have been manipulated by Mr. Sadler, but for elaborate, complete, and instructive papers upon Indian fibres, I must refer the Section to vol. ii. of the Society of Arts, p. 366, and to vol. v., p. 17, where the lamented Dr. Royle will be found to have nearly exhausted the subject.

On the Progress of FREE TRADE on the CONTINENT.

By M. CORRE VAN DE MAEREN, *Chairman of the International Free Trade Association at Brussels.*

[Read before Section (F.) Economic Science and Statistics, of the British Association for the Advancement of Science, at Leeds, 28th September, 1858.]

LAST year, the "*Association Internationale pour les Réformes Douanières*," sent a deputation to the "*Congrès de la Bienfaisance*," at Frankfort, to the Dublin Meeting of the British Association, and to the "*Congrès de Statistique*," at Vienna. We also sent a well appointed Committee to the Exhibition of Swiss Industry at Berne, with a mission to report upon the state of the industrial prosperity enjoyed by a country where no protective duties exist; the fiscal duty upon the importation of manufactured goods in Switzerland being 2 or 3 per cent.

The attention of our Committee was particularly directed to the state of the cotton manufactories in Switzerland; our object in this, being to demonstrate before the Cotton Manufacturers of Ghent, who are our greatest opponents, that the enormous protection of which they claimed the maintenance with such angry feelings towards us, was the direct cause of the poor figure they cut at the International Exhibitions of London and Paris.

Two members of our Committee, M. Victor Deheselle and M. Eugène Snoeck, both Cloth Manufacturers in our Woollen District of Verviers, were specially charged with this important part of the mission. A most complete and able report of the whole was drawn up by the well-known economist and editor of the "*Economiste Belge*," M. Gustave De Molinari. I regret that time will not allow me to-day to give you a translation of some extracts from our Report. I shall, however, just mention the heads of the conclusion, as regards the comparison of the cotton industry in Switzerland and in Belgium. Belgium has a population of four and a half millions, Switzerland of two and a half millions.

The following Table shows the duties on Cotton in both countries:—

Swiss Tariff.

	s.	d.	
Cotton, Raw	—	6	per 2 cwt. (100 kilog.)
Do. Thread and Twist	3	2	„
Do. Sewing Thread	5	6	„
Do. Cloth, Printed	12	10	„

Belgian Tariff.

	£	s.	d.	
Cotton, Raw				Free.
Do. Yarn	4	1	6	per 2 twt.
Do. Twist and Dyed.....	5	1	9	„
Do. Cloths	8	13	-	„
Do. do. Printed	15	1	-	„

If we calculate the value of the above goods, and compare it with the weight, we find that the duties in Belgium will run, *ad valorem*, from 50 to 150 per cent; whereas those of Switzerland do not exceed an average of 2 or 3 per cent.

Such is the state of Customs legislation in Belgium and Switzerland. The following are the respective results in both countries:— In Belgium, the cotton spinning occupies about 500,000 spindles; in Switzerland, the amount is 1,200,000. Belgium imports raw cotton of inferior quality eleven millions kilogrammes; Switzerland thirteen millions. Belgium exported, in 1856, 262,000 kilogrammes thread, and for a value of 16,871,000 francs cotton cloth; during the same year, Switzerland exported 820,000 kilogrammes of thread, and 8,250,000 kilogrammes of woven stuffs; the latter is valued, by M. Kindt, the delegate of the Belgian Government at the Swiss Exhibition, at eighty million francs.

Those figures require no comment; they speak for themselves, and notwithstanding their eloquence, the Ghent Manufacturers are using every effort to maintain the present enormous protective duties which are the evident cause of the inferiority they displayed at the Public Exhibitions.

However, in Belgium, as in almost every country, the Government is better placed than individuals to judge of economical results, and is looking forward anxiously to the reform of our tariff. A good step has been made in that direction, and a new law is now proposed to reduce the duties on cotton to the figures which we recommend, that is, 12 or 15 per cent. This measure, however, will meet with much opposition; the seven members for Ghent will vote against *any change* of the present duties on manufactured cottons.

The Belgian tariff has, in several instances, been modified in a liberal point of view. These changes are all comprised in our newly printed tariff (January last).

The French Government also seems anxious to give a liberal turn to the tariff; but, notwithstanding their strength, the present rulers of France were obliged to withdraw their liberal intentions, in presence of the powerful industrial coalition of the Northern Departments, and the deplorable ignorance of the principles of political economy throughout the whole population. And what is still more

discouraging, this state of things is likely to continue so, as long as the liberty of speaking and writing remains enslaved as it is at present in France.

Taking advantage of the prejudices they have so successfully established, the Manufacturers will maintain them by every means in their power. One of these consists in exciting the passions of the people by feelings of rivalry against England (and this is not a difficult matter to succeed in at present in France). The portion of the French Manufacturers who at present profess the greatest share of industrial monopoly, have formed amongst themselves a powerful association, the object of which is to re-establish the *continental blockade* against England, which was the great object of the first Emperor. That system, so energetically supported by their press, was defended against us by one of their lawyers, M. Walduck, at our last meeting of Ghent. They hope, as they say, to get every country in Central Europe to join them in reducing all tariffs to the *perpetual exclusion of England*. They will buy nothing from England; but they do not say whether they would condescend to sell to her. However absurd all this may be, this Association is at present making great efforts to buy some of our Belgian papers to their cause. I have just now been informed that they have purchased three of them, viz., the "Télégraphe," the "Observateur Belge," and the "Journal de la Belgique." You will have seen by the public papers how Prince Napoleon was obliged to withdraw his proposition to reduce the duties in Algiers, before the clamours of this party.

Our Belgian movement is progressing satisfactorily. All our attention is directed to the enlightening of the public mind, because we are convinced that no reform can stand, however useful it may be, while public opinion is not made favourable to it. Our agitation has another object; it teaches the people how to use the great instruments of popular opinion—the press and public meetings—in the practice and the working out of the constitutional liberties with which our country is blessed. By thus directing our efforts towards public opinion, we have obtained great results. We have gained to our cause all the Chambers of Commerce, but two or three; we have caused great reductions, and in many cases complete suppression of duties upon various raw materials, such as coal, iron, dye stuffs, &c.; we have promoted a petition to the House, from 10,000 agriculturists, asking the complete suppression of duties upon iron, and out of 108 representatives, 25 voted for that suppression. So we may say we are progressing; and, owing to the freedom we enjoy, we confidently hope for full success.

Notes on SELF-SUPPORTING DISPENSARIES, with some Statistics of the Coventry Provident Dispensary. Communicated by CHARLES H. BRACEBRIDGE, ESQ., Atherstone Hall, Warwickshire.

[Read before Section (F.) Economic Science and Statistics, of the British Association for the Advancement of Science, at Leeds, the 28th September, 1858.]

IN offering the Statistics of the self-supporting Dispensary at Coventry to this Section, I do it as an example of those institutions projected by Mr. H. L. Smith, of Southam, Warwickshire, which when supported by a sufficient number of members, have been successful. The Statistics of that at Northampton are fully as favourable, though not carried over so long a period; this latter having been instituted in 1845, and the former in 1831.* The Queen's visit to Warwick gave occasion to the formation of a Central Society for the promulgation of the principle, to whom application might be made for information as to rules, books, and other details, by the possession of which the founders might proceed safely, and without danger of failing in their objects, provided always the one necessity of all insurance against risks, sufficient numbers, be supplied. This little Society was founded at Warwick in July last (1858), the Lord Lieutenant, the High Sheriff, Lord Warwick, Lord Willoughby, and several magistrates and gentlemen of the county, as well as two or three gentlemen from Coventry and Northampton, being present, and vouching for the working of the Coventry and Northampton Dispensaries for more than twenty years. To this Society the following towns have already applied for information:—Bath, Bradford, Conway, Hereford, Southend, and Tadcaster. It is called the "Society for promoting the principles of Royal Victoria Self-supporting Dispensaries." Honorary Secretary—H. S. Smith, Esq., Southam; Bankers—Messrs. Greaves, Greenway, and Smith, Warwick; Committee meets at the Warwick Arms, at Warwick.

* The following are the statistics for 1857 of the Dispensaries at Coventry and Northampton:—

Place.	Members.	Cases Attended.	Midwifery Cases.	Paid for Drugs.	Paid to Medical Men.	Paid by Free Fund.
	No.	No.	No.	£	£	£
Coventry (founded 1832)}	4,500	2,927	48	251	491	749
Northampton (founded 1845)}	5,429*	14,960	222	166	578	751

* In 1851.

The advantages to members are, that the Dispensaries are founded on the principle of Provident Insurance. Practice is afforded to medical men, and emulation excited. Many cases, no doubt, are brought under their notice which would otherwise have been neglected, till too late for remedies to be applied ; to say nothing of the great facilities afforded by these institutions for obtaining statistics of disease, and of their tendency to promote sanitary improvements.

Clubs can be taken in *en masse*, and Cholera cases are attended gratis. The payments to medical men, when divided by the number of cases appear to be about 1*s.* at Northampton, but are considerably higher, about 3*s.* 4*d.*, at Coventry ; the other expenses are salaries to Dispenser and a boy, and the purchase of drugs, leeches, and instruments. The variation arises from calculating attendance on *every child* in one instance and not in the other. In each case the medical men have divided 750*l.*, [Coventry 1*l.* less, Northampton 1*l.* more,] and are satisfied. The number of visits made at patients' abodes in severe cases is not mentioned.

At Coventry each family selects its medical man for the year ; so that it becomes unnecessary to enter every slight case among the children for a proportional division among the medical men at the end of the year.

COVENTRY PROVIDENT DISPENSARY.—*Twenty-seven*

1	2	3	4	5	6	7
Years beginning 26th March.	Number of New Members, including Col. 3.	Members Admitted when Sick by Payment of 10s. for 8 Months' Attendance.	Cases of Sickness.	Cases Visited at Home, exclusive of Col. 6.	Midwifery Cases.	Deaths.
	No.	No.	No.	No.	No.	No.
1831.....	1,500	....	10	19
32.....	2,437	....	55	30
33.....	1,668	....	52	20
34.....	1,624	778	47	27
35.....	1,500	....	41	17
1836.....	1,610	....	53	28
37.....	1,382	....	31	26
38.....	1,638	....	48	34
39.....	1,921	....	39	39
40.....	2,001	....	51	37
1841.....	} 3,543	....	79	57 {
42.....	61	22
43.....		550	61	39
44.....		400	67	33
45.....
1846.....	2,193	....	50	27
47.....	2,044	....	50	35
48.....	1,878	....	30	35
49.....	2,060	....	....	49
50.....	1,795	....	....	39
1851.....	1,664	....	52	32
52.....	1,788	....	....	28
53.....	930	100	1,912	549	28	28
54.....	1,104	150	2,287	720	35	35
55.....	757	115	2,445	816	29	57
1856.....	883	122	2,654	643	25	64
57.....	685	134	2,927	852	48	53

Note.—From 1831 to 1852 there were two Surgeons; after that three Surgeons and The average number of Free Members on the books is about 3,000; it was limited.

Years, 1831-57. *Statistical Analysis of the Reports.*

8	9	10	11	12	13	14	15
Income.			Expenditure.				
Subscriptions and Donations. Interest of Funded Property.	Payments of Ordinary (Free) Members.	Total Income.	Paid to Medical Officers.	Salaries to Dispenser and Boy. Instruments.	Purchase of House, Rent, Rates, Repairs, &c.	Drugs and Leeches.	Total Expenditure.
£	£	£	£	£	£	£	£
329	126	455	81	67	27	46	221
140	366	506	263	77	31	103	474
144	401	545	268	73	25	113	479
118	416	534	287	67	43	89	486
128	397	525	262	72	27	95	456
107	392	499	262	74	22	90	448
138	359	477	245	72	21	54	392
88	426	514	287	69	23	99	478
86	429	515	305	69	24	84	482
92	437	529	287	61	21	110	479
74	418	492	269	63	245	108	685
306	384	690	278	61	450	71	855
121	409	530	266	61	12	81	420
109	445	554	289	67	15	106	477
87	451	538	293	64	10	105	472
74	435	509	283	61	9	75	428
78	411	489	270	61	9	76	416
71	377	448	245	61	12	75	393
69	348	417	226	62	8	86	382
62	375	437	252	61	15	74	402
72	335	407	223	72	10	79	384
62	345	407	243	77	8	59	387
63	431	494	288	71	7	92	458
64	510	574	340	79	10	119	548
66	564	630	376	79	26	133	614
64	647	711	431	92	15	132	670
66	749	815	492	97	10	151	750

one Consulting Physician.

at first, to 2,500; it is now about 4,500, many of whom are children.

The Sewing Machine in Glasgow, and its Effects on Production, Prices, and Wages. By JOHN STRANG, LL.D.

[Read before Section (F.) Economic Science and Statistics, of the British Association for the Advancement of Science, at Leeds, the 25th September, 1858.]

THE use of Sewing Machines throughout Europe and America, during the last few years, has increased to such an extent as not only to attract the attention of the mechanist towards their improvement, but likewise that of the economist as to their results. Whilst the imperfections of these novel instruments for curtailing labour and lessening expense are gradually being removed, we find the usual cry of their interference with the ill-paid sempstress being at the same time raised.

The first Sewing Machines publicly exhibited in Great Britain were one by Mr. Blodget of America, and another by Mr. Judkin, an Englishman, who, however, had imported his from the United States. Both were shown in action in the Hyde Park Exhibition of 1851, and were regarded as objects of great curiosity. During the short interval which took place between the close of the Crystal Palace and the opening of the Paris Exhibition, a great advance had taken place towards the improvement and variety of sewing machines; for we find that, in the Industrial Palace of the Champs Elysées, no fewer than fourteen different persons exhibited Sewing Machines; which were not there shown as novelties, but as articles in common use and for sale. In short, to use the words of the Rev. A. Willis, in his able Report on Machinery for Woven Fabrics, "it appeared as if this implement had sprung into industrial life and taken its place as an established and universally recognised member of the series of manufacturing machines." The machines exhibited in Paris consisted of four classes: 1st, Embroidering Machines. 2nd, Chain-stitch Machines. 3rd, Shuttle-stitch Sewing Machines; and 4th, Compound Chain-stitch Sewing Machines. Patents for all those different kinds and several more have been from time to time taken in Great Britain, France, and the United States of America.

The fact is, since the period of the first introduction till the present time, many changes have been made, and many new appliances have been added to these implements, both for improving the quality and adding to the quantity of the work done by them; and even at this hour there are mechanicians busying themselves with new improvements.

The cost of the various machines now in use varies greatly—the best ranging from 25*l.* to 30*l.* each, and some being produced of an inferior kind in America so low as ten dollars each. The better class

of machines at present used are calculated to make almost everything formerly executed by the needle, or even awl, viz., upper and under male and female clothing, caps, boot and shoe closing, saddlery, harness, carriage furniture, hats, trunks, carpet bags, sacks, sails, mitts, and gloves. In short, an ordinary Shuttle Machine will stitch equally well either a shirt collar or a leather trace for harness, and can be applied to every sort of tailoring or shoe-work.

The advantages derived from using a Sewing Machine in comparison to hand labour, depends much on the quality of the work to be done, but it is affirmed that the finer and more difficult the work the more benefit from the machine. In the least advantageous work the machine is equal to six persons, and in many kinds of work it is equal to ten or twelve. One of the latest improved machines will complete a thousand stitches in a minute. The stitch, too, can be altered from four to forty in an inch in a moment, while seams of every desired curve or angle can be sewed with perfect facility. In a word, the instrument has of late been so greatly improved, that its adoption is becoming more and more general throughout the great manufacturing marts of the world.

The important question then arises, has the introduction of Sewing Machines interfered with hand labour, and if so, to what extent. Limiting our inquiries in the meantime to Glasgow, where the introduction of Sewing Machines has been recent and their adoption rapid, it may be stated that, looking to all the sources likely to furnish correct information on the subject, the following results have been obtained, and may be relied on:—

1st, The number of machines at work in Glasgow at present is about 900.

2nd, Each machine on an average does the work of six or eight women, but it requires one to work it, and from three to four to prepare the work for it, and to fasten the ends. They are chiefly wrought by the foot, but a few are driven by the steam-engine. The latter power does not diminish the cost; but it leaves the attendant at greater liberty to use her hands, while it lessens her physical labour.

3rd, These 900 machines are chiefly employed on portions of shirts, chemises, stays, and other underclothing; on caps, on shoes and boots, and on portions of men and women's outer garments; but no article of dress of any kind is wholly executed by the machine, the remainder being done by the hand-needle, or other hand-labour, this remainder being generally the largest portion.

4th, The superior style or character of the work, combined with the lessened cost of the production, has greatly increased the demand for these articles for home consumption, but more particularly for shipment to all parts of the world. The machine has also increased

the ornamental work put upon articles of dress, such as double instead of single stitching upon chemises and shirts, and extra-ornamental stitching on the breast of coats and other upper-clothing.

5th, The wages of a handy female attending each machine are from 7s. to 10s. per week, whereas a mere sempstress can scarcely earn half this sum, and that, too, through long protracted labour. Those, however, who are employed in boot and shoe closing with the machine, of whom there are a considerable number in Glasgow, gain even higher wages, and work only nine hours a-day. This work has lately been done to such an extent, and the saving thereon has been so considerable, as to make it probable that ere long no other method will be pursued. There is a saving on this labour of nearly 50 per cent., and from 10 to 15 per cent. on the finished article.

6th, On the introduction of the Sewing Machine into certain of the tailoring establishments, considerable hostility to their use was manifested by the journeymen, and as yet the generality of the tailors working for first-class or fashionable parties do not patronise them, but they are being used by those making clothes for exportation and coarser garments for the labouring classes. The chief difficulty, in fact, arises from the labour being of two kinds—the machine attendant and the journeyman tailor—the latter objecting to finish any work which the other partly executes. It may be remarked, however, that the only parts of a coat which cannot yet be sewed by the machine are the button holes and sewing on the buttons.

From the foregoing statement it is pretty plain that the introduction of the Sewing Machine, while it has increased the power and the facility of production, and consequently lowered the price of the manufactured article, has at the same time been rather beneficial than hurtful to those dependent on their needle.

No doubt, like all new inventions for the saving of manual labour, the introduction of the Sewing Machine has produced several isolated cases of difficulty, but this soon clears away, and in the long run tends rather to raise than to lower the status of those connected with such labour. One thing, however, is certain—that those working or connected with Sewing Machines are making higher wages than they did by their former labour, and also, that while the machine may tend to displace a portion of male labour, it at the same time calls into existence female labour, and that, too, at an enhanced value.

The introduction of the Power-loom, it may be remembered, at once removed persons from the Hand-loom to the factory, and ere long raised the income and diminished the labour of those working in the latter, and the present indications tend to show that the same result will attend the metamorphosis of the ill-paid and hard-worked sempstress into that of the Sewing Machine attendant. Scarcely anything can aggravate the condition of her who depends on *plain*

sewing for her support ; and if machinery could only absorb the labour of those now wholly dependent on their needle, it might perhaps render the "Song of the Shirt" a picture only of the past, and confer a blessing on thousands of the worst requited daughters of labour in our country.

In conclusion, we need scarcely recall the fact that, when the railway system was inaugurated, it was feared that horses would in a great measure be thrown out of employment, but the event has long since shown that more horses are required, and that their money value has much increased since that great era in locomotion ; and it may be truly said that, as the railways did, so have the Sewing Machines *created a trade for themselves* ; that they have only displaced the most unprofitable portion of hand needlework, and have indeed tended rather to increase than to diminish the wages of those engaged in this species of labour.

NOTE BY EDITOR.

[In the course of the discussion which ensued on Dr. Strang's Paper at Leeds, Mr. Webster (of Great George Street, Westminster) mentioned that facts had come recently before him, proving that the Sewing Machine was in course of very rapid extension in London and all seats of large trade. Mr. Webster has been good enough to give me an introduction to Mr. W. Thomas of St. Martin-le-Grand, London, one of the original Patentees of the Sewing Machine, and probably in this country the largest maker of the Machines. Mr. Thomas entirely confirms the statement of Mr. Webster as to the rapid extensions which are taking place in the use of the Machine ; and he also fully confirms the statement of Dr. Strang as regards the economy, expedition, and enlarged employment arising from the use of the Machines. In one establishment in London, more than 90 Machines are employed chiefly in stitching men's linen collars. In a similar establishment in Ireland there are about 140 Machines. Mr. Thomas thinks that on an average each Machine is equal to the labour of about 15 persons. An enormous extension of employment too arises from the demand for hands to prepare and finish the work. The Machine is in course of extensive application to Boot and Shoe Making ; but at Northampton the workmen in these trades resist its employment, and it is said that the Boot and Shoe Trade is consequently removing to other Towns. The Machine is largely used by the Slop Tailors and Army Contractors. Under efficient management the cheapening effected by the Machine in the cost of producing articles to which it is applied may be taken at 20 to 25 per cent. Hitherto, however, the benefit of this cheapening has only partially reached the actual consumer, and the full value and importance of the invention will not be witnessed until the reduction of cost has begun to operate fully on the general body of consumers. It is quite clear, however, that before long the greatest part of the stitching work of the country will be done by machinery, thereby leaving at the disposal of the female members of each family a large part of the time now occupied in mere sempstress's labour.]

TWENTY-EIGHTH Meeting of the BRITISH ASSOCIATION for the Advancement of Science, held at LEEDS, 22nd—28th September, 1858.

Section (F).—Economic Science and Statistics.

President.—Edward Baines.

Vice-Presidents.—Colonel Sykes, M.P., F.R.S.; James Heywood, F.R.S.; W. Scrope Ayrton, F.S.A.; Darnton Lupton; Sir James Kay Shuttleworth.

Secretaries.—William Newmarch; John Strang, LL.D.; Professor Cairnes; Captain Fishbourne, R.N.; Thos. B. Baines, B.A.; Samuel Brown.

Committee.—Edmund Ashworth; Robert Baker; Joseph Bateman, LL.D., F.R.A.S.; Thomas Bazley; Rev. James Booth, LL.D., F.R.S.; Charles H. Bracebridge; Dr. Camps; Edwin Chadwick, C.B.; J. E. Dibb; C. W. Ditke; Wm. Donnelly, C.B.; W. E. Forster; Jas. Hole; J. A. Ikin; Thomas John Kinnear; Alderman Leeman (York); Dr. Waller Lewis; Horace Mann; Lord Montague; Wm. Murray; Alderman Neild (Manchester); F. G. P. Neison; Alderman Shuttleworth (Manchester); W. M. Tarrt; Rev. F. Watkins.

The following Papers occupied the attention of the Section:—

Thursday, 23rd September, 1858.

The President.—Inaugural Address.

1. *John Strang, LL.D.*—Water Supply to Great Towns—its extent, cost, uses, and abuses.
2. *Thomas Bazley.*—Trade and Commerce the auxiliaries of Civilization and Comfort.
3. *William Newmarch.*—On the History of Prices in 1857 and 1858.
4. *F. G. P. Neison.*—An examination of the influence of overcrowding and density of population in producing Phthisis and Diseases of the Respiratory Organs, applied to some questions discussed in the recent Report of the Sanitary Condition of the Army.

Friday, 24th September, 1858.

1. *The President.*—On the Woollen Manufacture of England, with special reference to the Leeds Clothing District.
2. *James Kitson, Jun.*—On the Iron Trade of Leeds.
3. *Robert Baker.*—On the Industrial Economy of Leeds and its district.
4. *John James.*—On the Rise, Progress, and Present State of the Worsted Manufactures of Yorkshire.
5. *J. E. Dibb.*—On the Registry of Deeds in the West Riding.
6. *Dr. Bateman.*—On the Rate of Mortality in the Metropolitan Improved Dwellings for the Industrial Classes.

Saturday, 25th September, 1858.

1. *W. M. Tait.*—On Subjects connected with Crime and Punishment.
2. *Hamer Stansfeld.*—On Distinctions between Money and Capital.
3. *John Strang, LL.D.*—On the Money Rate of Wages in the West of Scotland, in 1851, 1857, and 1858.
4. *Professor Cairnes.*—On the Laws according to which a Depreciation of the Precious Metals, consequent upon an increase of Supply takes place, considered in connection with the recent Gold Discoveries.
5. *Samuel Brown.*—On the Financial Prospects of the British Railways.
6. *John Strang, LL.D.*—On the Sewing Machine in Glasgow, and its effects on Produce and Wages.

Monday, 27th September, 1858.

1. *James Heywood, F.R.S.*—Public Service—Academic and Teachers' Examinations.
2. *Edwin Chadwick, O.B.*—On the Practical Progress of the Principle of Competitive Examinations.
3. *John Pope Hennessy.*—Results of the Society of Arts' Examinations.
4. *Dr. Bateman.*—On the Degree of Education of Persons tried at the Middlesex Sessions.
5. *H. Walker.*—On the results of Free Trade.

Tuesday, 28th September, 1858.

1. *M. Van der Maeren.*—On Free Trade in Belgium.
 2. *Dr. Bateman.*—On the Investments of the Labouring Classes.
 3. *Robert Hunt.*—On the Mining Industry of Yorkshire.
 4. *W. Newmarch.*—On the recent History of the *Crédit Mobilier*.
 5. *John Pope Hennessy.*—On the prices of Cotton.
 6. *Col. Sykes.*—Notes on Indian Fibres, with Specimens.
 7. *J. G. Marshall.*—On the Flax Manufacture in Yorkshire.
 8. *C. H. Bracebridge.*—On self-supporting Dispensaries in Warwickshire.
 9. *Mrs. Fysc.*—On Colonial Postage.
 10. *Richard Valpy.*—Brief Review of the Operations in the Bank of England in 1857.
 11. *Wm. Donnelly, C.B.*—On Agricultural Statistics in Ireland.
-

ABSTRACT OF THE REGISTRAR-GENERAL'S RETURN
OF THE
MARRIAGES IN ENGLAND AND WALES DURING THE SECOND QUARTER
(APRIL—JUNE), AND OF THE BIRTHS AND DEATHS DURING THE
THIRD QUARTER (JULY—SEPTEMBER), OF 1858.

THIS Return comprises the BIRTHS and DEATHS registered by 2,197 Registrars in all the districts of England during the Summer Quarter that ended on September 30th, 1858; and the MARRIAGES in 12,303 churches or chapels, about 3,997 registered places of worship unconnected with the Established Church, and 629 Superintendent Registrars' offices, in the quarter that ended on June 30th, 1858.

The depression of the country diminished in the spring quarter of the year. The Marriages nevertheless remained below the average number.

The Birth-rate was slightly below the average in the Summer Quarter. The mortality was less than the average of the summer season, and this is to some extent the result of sanitary improvements.

MARRIAGES.—39,909 Marriages were celebrated in the Quarter ending June 30th; consequently 79,818 persons married in the three months. This is nearly 20,000 in excess of the numbers married in the previous quarter, but is somewhat less than the numbers in the corresponding quarter of last year. The people married at the annual rate of 164, the average rate of the season being 171 in 10,000. The rate of marriage is lowest in winter; and in the last winter it was 125, or 16 below the average of that season; so that the improvement of the prospects of the people in spring is evident. The agricultural counties of the South of England, the Northern counties and London, were but slightly affected; Staffordshire and Lancashire experienced the greatest degree of depression, but that was not very considerable.

ENGLAND:—MARRIAGES, BIRTHS, and DEATHS, returned in the Years
1852-58, and in the QUARTERS of those Years.

Calendar Years, 1852-58:—Numbers.

Years	'56.	'57.	'58.	'55.	'54.	'53.	'52.
Marriages No.	159,392	159,337	152,113	159,727	164,520	158,782
Births	662,884	657,453	635,043	634,405	612,391	624,012
Deaths.....	420,019	390,506	425,703	437,905	421,097	407,135

QUARTERS of each Calendar Year 1852-58.

(I.) **MARRIAGES:—Numbers.**

Qrs. ended last day of	'56.	'57.	'58.	'55.	'54.	'53.	'52.
March .....No.	30,034	33,381	33,427	29,186	33,234	35,149	32,977
June	39,909	41,296	38,820	38,549	40,518	40,446	40,092
Septmbr.....	....	38,829	39,089	37,308	38,182	39,899	38,400
Decmbr. ....	....	45,886	46,001	47,070	47,793	49,026	47,313

QUARTERS of each Calendar Year 1852-58.

(II.) BIRTHS:—Numbers.

<i>Qrs. ended last day of</i>	'58.	'57.	'56.	'55.	'54.	'53.	'52.
March .....No.	171,001	170,381	169,250	166,225	160,785	161,729	161,803
June "	169,170	170,313	173,263	165,277	172,457	158,697	159,031
Septmbr. "	157,449	161,215	157,462	154,700	164,724	147,602	151,222
Decmbr. .... "	....	160,975	157,478	148,841	146,439	144,363	151,956

(III.) DEATHS:—Numbers.

<i>Qrs. ended last day of</i>	'58.	'57.	'56.	'55.	'54.	'53.	'52.
March .....No.	125,902	108,527	103,014	134,542	111,843	118,119	106,368
June "	107,193	100,205	100,099	106,493	102,586	107,647	100,625
Septmbr. "	98,260	100,590	91,155	87,646	113,843	92,201	100,382
Decmbr. .... "	....	110,697	96,238	97,022	109,633	103,130	99,770

BIRTHS.—157,449 children were registered in the quarter that ended on September 30th, or 3,766 less than the births in the corresponding quarter of the previous year. The birth-rate was 3·195, or slightly below the average rate of the season, 3·247.

INCREASE OF POPULATION.—157,449 Births and 98,260 Deaths were registered, consequently the natural increase of the population in the 92 days was 59,189, or 643 daily in England. The probable natural increase of population in the United Kingdom was 964 daily.

10,803, or, allowing for persons of undistinguished nationality, 12,844 English Emigrants sailed from ports at which there are Government emigration agents in the last three months; 6,859 to the Australian colonies, 692 to the North American colonies, 4,877 to the United States, and 416 to all other places.

ENGLAND:—*Annual Rate Per Cent. of MARRIAGES, BIRTHS, and DEATHS, during the YEARS 1852-58, and the QUARTERS of those Years.*

Calendar YEARS, 1852-58:—General Per Centage Results.

YEARS	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
Estmtd. Popln. of England in thousands in middle of Year.....	19,523,	....	19,305,	19,045,	18,787,	18,619,	18,403,	18,206,
Marrgs. Per ct.	....	·842	·826	·837	·810	·858	·894	·872
Births .... "	....	3·374	3·434	3·452	3·380	3·407	3·328	3·428
Deaths .... "	....	2·246	2·176	2·050	2·266	2·352	2·288	2·236

QUARTERS of each Calendar Year, 1852-58.

(I.) MARRIAGES :—Per Centages.

<i>Qrs. ended last day of</i>	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
March....Per ct.	·627	·705	·705	·708	·633	·728	·778	·730
June..... "	·821	·853	·860	·819	·824	·875	·883	·885
Septmbr. "	....	·809	·797	·813	·787	·813	·839	·836
Decmbr. "	....	·998	·939	·995	·989	1·015	1·053	1·027

(II.) BIRTHS :—Per Centages.

<i>Qrs. ended last day of</i>	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
March....Per ct.	3·568	3·518	3·599	3·585	3·603	3·520	3·578	3·582
June "	3·492	3·552	3·546	3·656	3·534	3·722	3·464	3·509
Septmbr. "	3·195	3·247	3·308	3·275	3·261	3·294	3·177	3·291
Decmbr. "	....	3·181	3·294	3·264	3·128	3·111	3·100	3·298

(III.) DEATHS :—Per Centages.

<i>Qrs. ended last day of</i>	'58.	Mean '48-'57.	'57.	'56.	'55.	'54.	'53.	'52.
March....Per ct.	2·627	2·471	2·292	2·182	2·916	2·449	2·613	2·354
June..... "	2·206	2·225	2·086	2·112	2·277	2·214	2·355	2·221
Septmbr. "	1·994	2·140	2·064	1·896	1·848	2·423	1·985	2·183
Decmbr. "	....	2·154	2·265	1·995	2·039	2·329	2·214	2·165

THE WEATHER AND THE PRICE OF PROVISIONS.—The prices of Wheat fell progressively from 72s. 3d. a quarter, in the months of July, August, September 1856, to 59s. 11d. in 1857, and to 44s. 7d. on an average in the corresponding three months of the present year; the decrease of price was thus 38 per cent. The price of beef by the carcase at Leadenhall and Newgate markets fell in the two years from 5½d. to 5¼d. a pound; mutton from 6d. to 5¼d. a pound, or 8 per cent. in price. Potatoes (York Regents) were sold at 78s. a ton at the Waterside Market, Southwark; or 26 per cent. less than the prices of the same season of the previous year. In this year 30 lbs. were sold for a shilling; in the last year 21 lbs. only. The price of potatoes is now the same as the price was in 1856.

The Weather during the three months presented some peculiarities; at Greenwich the temperature of the air in July was below, in August slightly above (1·5°), in September 4·0° above the average of 87 years. The humidity was below, the barometric pressure above the average. The rain-fall was 5·4 in. in the three months, or nearly two inches below the average. The rain-fall was not so scanty in the

north; in latitude 52°-53° it was 7·1 in., in latitude 53°-54° it was 8·4 in. In the Isle of Wight, Devon, and Cornwall from 7 to 8 inches of rain fell.

STATE OF THE PUBLIC HEALTH.—98,260 Deaths were registered in 92 days; and the mortality was at the rate of 1·994 per cent. annually, or ·146 below the

The Average Prices of CONSOLS, of WHEAT, MEAT, and POTATOES, also the Average Quantity of Wheat sold and imported Weekly, in each of the nine QUARTERS ended September 30th, 1858.

1	2	3	4	5	6	7	
Quarters ended	Average Price of Consols (for Money).	Average Price of Wheat per Quarter in England and Wales.	Wheat sold in the 290 Cities and Towns in England and Wales making Returns.	Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the Mean Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.
			Average Number of Quarters weekly.		Beef.	Mutton.	
	£	s. d.	No.	No.	d. d. d.	d. d. d.	s. s. s.
1856 30 Sept.	95	72 3	78,208	117,807	4½—6½ 5½	5—7 6	75—80 78
31 Dec.	92½	63 4	112,909	103,328	3½—6½ 5½	4½—6½ 5½	90—110 100
1857 31 Mar.	93½	56 10	102,433	51,310	4½—6½ 5½	5½—7½ 6½	100—120 110
30 June	93½	56 9	107,850	42,178	4½—6½ 5½	4½—6½ 5½	105—150 127
30 Sept.	90½	59 11	92,156	55,384	4½—6½ 5½	4½—7 5½	95—115 105
31 Dec.	89½	52 0	101,025	95,587	4½—6½ 5½	4½—7 5½	130—150 140
1858 31 Mar.	96½	46 5	99,604	64,652	4½—6½ 5½	4½—7 5½	130—175 152
30 June	97½	44 1	92,955	86,551	4½—6 5½	4½—6½ 5½	140—185 162
30 Sept.	96½	44 7	97,307	82,373	4½—6½ 5½	4½—6½ 5½	65—90 77

Note.—The Total Number of Quarters of Wheat sold in England and Wales, and entered for Home Consumption, has been as follows:—

13 Weeks ended	Qrs. Sold.	Home Consumption. Qrs. Entered.
1856—30 Sept.	1,016,000	1,531,000
„ 31 Dec.	1,467,000	1,446,000
1857—31 March	1,331,000	667,000
„ 30 June	1,402,000	548,000
„ 30 Sept.	1,198,000	719,000
„ 31 Dec.	1,313,000	1,242,000
1858—31 March	1,294,000	840,000
„ 30 June	1,208,000	1,125,000
„ 30 Sept.	1,264,000	1,070,000

average rate of the season exceeded 21; the actual rate of the last quarter was less than 20 in 1,000.

During the last summer the annual rate of mortality in the population of the country, of Villages and of small towns, was at the rate of 17 in 1,000; the average rate being 18. And in the same time the Town population died off at the annual rate of 24 in 1,000; the average rate being 26.

The deaths in the ninety-two days amounted to 98,260. If the mortality had been at the standard rate deduced from sixty-three of the Least Unhealthy districts, the deaths would have amounted to 73,088; consequently the deaths in excess of the comparatively healthy average, or the unnatural deaths, amounted to 25,172; of which 20,146 happened in the large towns, and 5,026 in the small towns and villages.

Diphtheria, which is often called "throat disease," has prevailed in some districts of the south, and has now extended northwards; it has been fatal in the Horncastle district, Lincolnshire; prevalent in Newark; and several children have

Deaths in the Summer Quarters, (July—Sept.) 1851-58.—Numbers.

DEATHS, &c.	1858.	Total 1848-57, (10 Years.)	1857.	1856.	1855.	1854.	1853.	1852.	1851.
In 125 Districts and 23 Sub-districts, comprising the Chief Towns	53,709	549,368	55,733	49,975	46,654	67,555	50,153	54,803	49,113
In the remaining Districts and Sub-Districts of England and Wales, comprising chiefly Small Towns and Country Parishes ...	44,558	436,662	44,857	41,180	40,993	46,898	43,048	45,579	42,396
All England	98,260	986,030	100,590	91,155	87,646	113,843	93,201	100,383	91,499

AREA, POPULATION, DEATHS, and MORTALITY per Cent. in the Summer Quarters, (July—Sept.) 1848-58.

GROUPS.	Area in Statute Acres. (England.)	Population Enumerated. (England.)		Deaths in 10 Summer Quarters, 1848-57.	Average Annual Rate of Mortality per Cent. of 10 Summer Quarters, 1849-57.	Annual Rate of Mortality per Cent. in the Summer Quarter 1858.
		June 6-7th, 1841.	March 31st, 1851.			
In 125 Districts, and 23 Sub-Districts, comprising the Chief Towns	No. 2,149,800	No. 6,838,069	No. 8,247,017	No. 549,368	Per ct. 2.565	Per ct. 2.393
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly Small Towns and Country Parishes	35,175,115	9,076,079	9,680,592	436,662	1.781	1.685
All England	37,324,915	15,914,148	17,927,609	986,030	2.140	1.994

died of the disease in Sheffield. Districts of the East Riding and of the North Riding of Yorkshire have been visited by the epidemic diphtheria.

Typhoid fever, which a young physician, Dr. Murchison, proposes to call pythogenic* fever, to point at its origin from putrid animal effluvia, has been prevalent in some districts. Several deaths occurred from it in Daventry. All the cases were confined to a small space which was badly drained. The Regius Professor of Medicine in the University of Oxford has recently written an interesting report on this fever occurring in the parish of Great Horwood. The township contained a population of 704 in 1851; and 125 had been attacked, 18 killed by the fever up to July 9th, the date of his report. He shows how the village, on the ridge of a hill, in a parish pleasantly wooded, with fine pastures and fruitful corn fields, occupied by a population wholly agricultural, was attacked by the fever; how the first case, appearing about Michaelmas in last year, occurred in one of the best houses in the place. The patient had been at Buckingham, and there was much fever at the time. He then tells how the brothers and sisters of the servant, and the servant herself, finally fell ill in their home; how all the people of a room over filthy water, in the worst house in the parish, were attacked, and three of the family died; and then how the inmates of a new row of houses and of old cottages were visited by the village plague. He sums up by ascribing the continuance of the disease during the last nine months in various degrees to contagion, overcrowded dwellings, putrescent matter, and an insufficient supply of fresh air, or, as it is called, bad ventilation. The evil is most grievous in the sleeping rooms, "We can do no more," said one woman, "than keep clean that which we have. We cannot get our landlord to give us more air, or make the windows we have to open. 'Women,' he said, 'are best shut up.'" "I often awake stifled," said another woman, "and me and my husband go and sit at the window." The poor people, however, can remedy the other great evil from which they suffer; "accumulations of muck, filth, and piggeries close to human dwellings." Here is the type of fever and its causes in agricultural districts. Dr. Acland shows how the ravages of disease may be diminished. He sketches a model cottage, and refers for further information to the admirable volume by Roberts on the dwellings of the labouring classes. He tells how dwellings should be managed, and how nuisances should be abolished.†

The greater part of the evils from which the country people are now suffering is the result of ignorance, which can only be dispersed by the diffusion of sanitary knowledge through its natural channels, the medical practitioners, the public writers, the lawyers, the clergy, and the gentry of the country. Dr. Acland, at one of the fountain heads of education, has great opportunities, which he has already turned to account in this direction, with the happiest effects.

Following the waters of the hills of Buckinghamshire down through the fens, we arrive at Ely. Here a remarkable example is found of the salutary effects of simple sanitary measures, of which every town in the kingdom may have the advantage. Ely stands, with its lofty cathedral, on one of the old fen Islands. It is a small city of 6,176 inhabitants (in 1851), and is in the neighbourhood of the low lands, where the great systems of modern embankments and draining were commenced by Vermuyden, one of Cromwell's colonels of horse. The Bishop of Ely in ancient times went in his boat to Cambridge. And the country around, like all our old marshes, is still imperfectly drained. The atmosphere has therefore no natural advantages. The Public Health Act was introduced in 1851. The Ely Board of Health was

* *πύθουαι*, putresco.

† "Fever in Agricultural Districts. By H. W. Acland, M.D., F.R.S., Regius Professor of Medicine in the University of Oxford." This pamphlet should be widely circulated through all the agricultural districts.

founded. They set on foot two great works ; one for supplying the town with water, the other for carrying off that water through every house clear out of the town. The public works were completed at the end of 1854 ; and the houses were gradually connected with the public sewers, leaving, however, at the end of 1857, 200 in 1,200 houses out of connection. Mr. Marshall, the superintendent registrar of the district, in an able paper shows the results of this great experiment. In the seven years (1843-49) before the Public Health Act was in operation the mortality was at the rate of 26 deaths annually to every 1,000 living ; in the seven subsequent years (1851-57), when the sanitary measures were only partially carried out, the mortality fell down to the rate of 19 deaths annually to every 1,000 living. The mortality in the two last years (1856-57) was the rate of 17 in 1,000. In the same periods the surrounding rural parishes underwent some improvement ; but the improvement of the city has advanced so much more rapidly that its mortality was in the last two years 4 in 1,000 less than the mortality of the surrounding country. The young people under the age of 35 have enjoyed remarkable immunities from disease, and the benefit will be transmitted to succeeding generations. The two chief sanitary works which have been completed are the introduction of water taken from the river of inferior quality, and the destruction of *four thousand* cubic yards of cesspools,—nearly four yards to each house. The surveyor, Mr. Burns, exclaims, with justifiable pride, “ There is still a number of cesspools remaining, and the “ sooner they are done away with the better. After this is done, I may truly say “ that I found Ely a city of cesspools, filth, and sickness ; but I shall leave it a city “ of drains, health, and cleanliness, and that is something to be proud of.” Yes, Mr. Burns, you may well be proud of your work, Pau in the Pyrenees, to which British invalids still resort for health, experienced a mortality of 28 and 23, when you had reduced the mortality of Ely to 17 in 1,000*

The citizens of Ely have sunk 15,000*l.* on their sanitary works, which appear to have been conducted in something like the same determined spirit as animated Cromwell's colonel of horse. Certain ratepayers who enjoy the benefits complain of the burthen of the rates.

We may now turn from this small resolute city in an agricultural district to Liverpool, the second city of the kingdom, where the great work of sanitary improvement is also advancing.

Liverpool lies on the shore of the fresh, deep, wide Mersey, which is lined by her magnificent docks ; and the houses rise from the river over the red sandstone heights in long stretching lines. Lancashire and Cheshire cover the plains and hills behind the queenly town ; before her are Ireland, America, and the Ocean which her ships ride over, carrying foreign produce or the manufactures of the north, to and from the various regions of the world. The place is well chosen for health ; and in “ Gough's Camden” (ed. 1806) Liverpool is said to be celebrated for “ her beauty and populousness.” Yet it was found and published in the first Registration Report,† that the mortality of the population of this district was in the latter half of 1837 at the rate of 39 in 1,000 annually ; while the population of West Derby, containing with other parishes, the outlying parts of the borough, died at the rate of 25 in 1,000. The strong contrast between the contiguous places, and the subsequent discovery that Liverpool was one of the unhealthiest parishes in the kingdom, excited surprise as well as regret in the public mind. A local association was formed of some of the best people ; and the causes of the mortality were investigated and were afterwards made known by Dr. Sutherland in a series of lucid papers. Little,

* See Paper by Dr. Ottley in “ Medical Gazette,” 23rd October, 1858.

† “ Registrar General's First Report,” Appendix, p. 118. 1839.

however, was done; the prophets had been crying in the desert; and in 1846 the mortality grew still more threatening. Cholera raged fearfully in the borough in 1849. Steps were now taken to carry out sanitary measures, under the direction of Dr. Duncan and the other able officers of the town. The sanitary school of Liverpool subsequently furnished some of the most efficient members of the commission which did good service in the East. Still it is to be regretted that the health of the great bulk of the population of Liverpool has improved but slowly. Liverpool has a good supply of water: but it is still infested by cesspools, including under this name the filthy Lancashire midden; and the drains pour their contents into the dock basins, which exhale a malarious sickly air over the people. The mortality in the borough of Liverpool was at the rate of 29 in 1,000 in the year 1857. Much good, therefore, has been done since 1837; thousands of lives have been saved. Still Liverpool has not yet, like Ely, taken the bull by the horns. Or why should not the mortality be as low as 19 or even 17 in 1,000? What natural advantages has Ely, taking one thing with another, over Liverpool? If Ely has had thousands of cubic yards of dirt removed, Liverpool has hundreds of thousands of cubic yards to deal with; but her means are commensurate with her duty. Mr. Newlands can do for Liverpool what Mr. Burns has done for Ely. The cesspool, the midden, or call it what they may, for it is still the same, is the chief destroyer of the Lancashire population. Crowded dwellings, vice, want, do a part of the mischief; but in Liverpool the cesspool destroyed a large proportion of the 6,418 people who last year perished in excess of the numbers who would have died at the rates prevailing in country districts. The tender-hearted may shed natural tears over them as they lie in the cemetery. Abolish the cesspools of Liverpool and you immediately save the lives of thousands of people. Yet the parties who have exerted themselves to put a stop to capital punishments have not been roused by the ruthless destruction of men; and no Beccaria has written on these crimes and punishments. A living poet in one of his last poems, exclaims:—

“Ah, it is the gallows tree!

“Breath of Christian Charity,

“Blow! and sweep it from the earth.”

But what number of lives did the “gallows tree” take away in 1857? Thirteen in all England and Wales; two only in Lancashire. And these were the lives of murderers, who were put to death for their crimes after the most deliberate judicial inquiry. But the six thousand four hundred and eighteen men, women, and children of Liverpool were destroyed cruelly in that year without discrimination. Of the cesspool, rather than of the gallows tree, a wiser muse will sing,—*Sweep it from the earth.*

MARRIAGES Registered in the Quarters ended 30th June, 1856-58; BIRTHS and DEATHS Registered in the Quarters ended 30th September, 1856-58, in the Divisions of England.

DIVISIONS.	AREA in Statute ACRES.	POPULATION, 1851. (<i>Percent.</i>)	MARRIAGES			BIRTHS			DEATHS		
			Registered in the Quarter ended the last Day of								
			June.			September.			September.		
			1856.	1857.	1858.	1856.	1857.	1858.	1856.	1857.	1858.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
ENGLD. & WALES....Totals	37,324,915	17,927,609	38,820	41,296	39,909	157,462	161,215	157,449	91,155	100,590	98,260
I. London.....Totals	78,029	2,362,236	6,347	6,817	6,812	21,127	21,664	20,934	14,241	14,455	14,557
II. South Eastern Counties	4,065,105	1,628,386	3,032	3,220	3,045	12,806	13,664	13,013	7,878	8,179	8,135
III. South Midland Counties	3,201,290	1,234,332	1,933	2,093	2,017	9,928	10,274	9,700	5,541	6,392	5,758
IV. Eastern Counties.....Totals	3,214,099	1,113,982	1,638	1,811	1,759	8,478	8,704	8,433	5,101	5,677	5,327
V. South Western Counties	4,994,490	1,803,291	3,412	3,582	3,687	13,343	13,447	13,469	7,117	7,687	7,885
VI. West Midland Counties	3,865,332	2,136,573	4,821	5,251	4,875	19,628	19,856	20,408	10,275	12,379	11,360
VII. North Midland Counties	3,540,797	1,215,501	2,598	2,924	2,622	10,340	10,443	10,199	5,540	6,266	6,492
VIII. North Western Counties	2,000,227	2,488,438	6,220	6,523	6,153	24,178	25,110	23,866	15,621	17,280	16,575
IX. Yorkshire.....Totals	3,654,636	1,789,047	3,858	4,065	4,004	17,341	17,175	16,951	9,170	10,907	10,547
X. Northern Counties	3,492,322	969,126	2,314	2,317	2,400	9,994	10,040	10,061	5,111	5,907	5,872
XI. Monmthsh. and Wales..	5,218,588	1,186,697	2,647	2,693	2,535	10,299	10,838	10,415	5,560	5,461	5,752

REMARKS ON THE WEATHER,

DURING THE QUARTER ENDING SEPTEMBER 30TH, 1858.

By JAMES GLAISHER, Esq., F.R.S., &c., Sec. of the British Meteorological Society.

Till July the 10th the air was cold, being $5^{\circ}7$ below the average temperature; it then became warm until the 25th, the mean excess above the average being $2^{\circ}5$; from the 25th to the end of the month the air was cold again, the average deficiency being $2^{\circ}5$. The mean high day temperature was $73^{\circ}8$, exceeding the average by $0^{\circ}2$; and the mean low night temperature was $51^{\circ}8$, being $1^{\circ}4$ below the average. The mean temperature of the month was about 1° below the average.

August was warm till the 24th, being 2° above the average temperature, then till the end of the month the air was cold, the average deficiency being $2\frac{1}{2}^{\circ}$. The mean high day temperature was $75^{\circ}6$, exceeding its average by $2^{\circ}9$; and the mean low night temperature was $52^{\circ}1$, being $1^{\circ}4$ below the average. The mean temperature of the month was $1\frac{1}{2}^{\circ}$ above the average of the preceding 87 years.

September was warm throughout, being 4° in excess of the average of 87 years. The mean high day temperature was $70^{\circ}9$, exceeding the average by $3^{\circ}4$; and the mean low night temperature was $52^{\circ}6$, exceeding the average by $3^{\circ}7$. The mean temperature of this month has been but four times exceeded during the last 87 years; viz., in the years 1779, 1795, 1815, and 1818, when the mean temperature was respectively, $60^{\circ}7$, $60^{\circ}8$, $62^{\circ}3$, and $60^{\circ}7$.

The mean temperature of the dew-point was below its average in July and August, and above in September. *The mean degree of humidity* was in defect in each month of the quarter, and the air, therefore, was somewhat less humid than usual in these months.

The mean reading of the Barometer was in defect in July and in excess of the average in August and September; and was slightly in excess for the quarter.

The fall of rain was a little above the average in July; one inch below in August; and $1\frac{1}{2}$ inch below in September; and for the quarter there was a deficiency of about half an inch. The fall of rain at Lewisham, since January 1, is $14\frac{1}{2}$ inches, and in the corresponding period of last year was somewhat less than $14\frac{1}{2}$ inches.

The mean temperature of the air at Greenwich for the quarter ending September, constituting the three summer months, was $62^{\circ}5$, being $2^{\circ}5$ above the average 87 years.

1858. Months.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air—Daily Range.						
		Mean.	Diff. from Average of 87 Years.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Water of the Thames.	Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.
July	60.6	-0.8	-1.1	65.7	-1.8	61.5	-2.4	62.0	+1.6	65.2	In. .380	In. -.037	Gr. 4.3	Gr. -0.3	
Aug.	63.0	+1.5	+0.6	66.5	-1.1	61.7	-2.6	63.5	+4.2	66.3	.385	-.041	4.3	-0.5	
Sept.	60.3	+4.0	+3.4	66.6	+2.7	63.4	+2.4	18.3	-0.3	63.1	.406	+0.025	4.6	+0.4	
Mean.....	61.0	+1.6	+1.0	66.3	-0.1	62.2	-0.9	21.3	+1.8	64.5	.391	-.018	4.4	-0.1	

1858. Months.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Mean.	Diff. from Average of 17 Years.	Amnt.	Diff. from Average of 40 Years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
											At or below 30°.	Between 30° and 40°.	Above 40°.		
July	73	- 4	In. 29.781	-0.15	Gr. 529	+ 2	In. 2.9	In. +0.2	Miles. 77	...	2	29	39.0	57.0	
Aug.	70	- 8	29.826	+0.29	529	+ 1	1.6	-0.9	...	...	12	19	33.2	59.3
Sept.	78	- 3	29.845	+0.27	531	- 3	0.9	-1.2	101	...	6	24	33.8	55.0	
Mean.....	73	- 5	29.834	+0.14	530	...	Sum 1.8	Sum -0.6	Mean ...	Sum ...	Sum 20	Sum 73	Lowest 32.2	Highest 56.3	

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

ENGLAND.—Meteorological Table, Quarter ended 30th September, 1858.

NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tempera- ture in the Quarter.	Mean Monthly Range of Tempera- ture.	Mean Daily Range of Tempera- ture.	Mean Tempera- ture of the Air.	Mean Degree of Hu- midity.	WIND.					Mean Amount of Cloud.	RAIN.	
									Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount collected.
										N.	E.	S.	W.			
Guernsey	29·632	75·0	51·5	23·5	19·0	9·1	59·3	81	1·7	18	8	24	42	4·4	31	in. 6·5
Helston	29·610	83·0	46·0	37·0	31·7	15·3	61·1	83	2·1	23	18	19	32	4·9	44	9·4
Exeter	29·628	83·0	45·5	37·5	33·2	15·6	61·2	72	1·6	30	10	27	25	6·5	49	6·5
Venmor	29·638	77·0	50·0	27·0	25·0	9·2	61·6	87	...	17	15	18	42	...	40	6·8
Worthing	29·586	79·5	46·0	33·5	27·9	12·8	61·2	81	1·0	25	13	14	40	4·4	25	5·2
Barstaple	29·578	82·0	44·2	37·8	34·0	15·0	60·7	81	...	15	25	23	29	4·3	47	9·1
Clifton	29·612	82·1	40·3	41·8	37·7	16·7	59·4	77	0·7	23	18	17	34	5·9	...	6·7
Royal Observatory	29·611	88·2	41·5	46·7	43·4	21·2	61·0	73	...	22	17	28	25	6·3	30	5·4
St. Thomas's Hos.	29·560	91·0	48·2	42·8	35·7	16·6	62·3	71	...	22	16	18	36	...	...	...
Rose Hill .....	...	85·5	40·1	45·4	41·6	...	...	...	...	...	...	...	...	...	37	6·9
Hartwell Rectory	29·575	87·1	42·3	44·8	41·7	18·5	60·1	76	1·0	20	14	23	35	5·4	30	3·8
Royston	29·627	87·4	43·0	44·4	43·2	20·2	60·3	75	...	24	13	21	34	6·1	51	7·1
Launcepton	29·590	86·6	36·4	50·2	42·9	19·5	57·8	90	0·4	16	5	33	38	6·1	37	8·4
Norwich	29·539	86·0	40·0	46·0	40·7	17·6	60·6	79	1·7	18	15	31	28	5·6	32	7·0
Graham	29·609	84·6	41·4	43·2	37·7	15·5	59·2	76	...	19	15	22	36	6·3	39	9·0
Holkham	29·573	86·3	37·2	49·1	43·4	16·2	59·7	79	1·3	26	16	26	24	...	35	6·0
Nottingham	29·625	90·5	37·9	52·6	48·6	22·3	60·4	69	0·3	25	12	21	34	6·6	46	6·5
Liverpool	29·643	77·8	49·0	28·8	25·3	10·8	60·2	75	1·1	...	...	...	...	6·9	40	7·0
Wakefield	29·578	84·2	38·0	46·2	42·9	20·1	58·7	81	1·8	16	14	23	39	6·6	43	7·2
Stonyhurst	29·579	78·1	41·5	36·6	34·2	15·5	56·7	82	1·1	24	16	19	33	6·8	61	13·7
York	29·538	76·0	37·0	39·0	32·2	14·4	56·9	84	...	21	22	16	33	...	37	9·3
Scarborough	29·476	72·0	46·0	26·0	24·2	9·5	57·2	89	2·6	19	16	29	28	...	...	...
North Shields	29·651	73·0	40·0	33·0	29·6	14·2	55·3	85	1·7	26	14	20	32	5·1	42	17·3
Silloth	29·544	82·9	37·6	45·3	38·4	17·6	57·9	78	1·2	12	22	17	41	4·7	48	13·6

IMPORTS.—(United Kingdom).—First Eight Months (Jan.—Aug.) 1888-7-8.
Computed Real Value of Articles of Foreign and Colonial Merchandise Imported.

(First Three Months.) FOREIGN ARTICLES IMPORTED.		1858.	1857.	1856.
		£	£	£
RAW MATLS.— <i>Textile.</i>	Cotton Wool	22,291,000	22,564,000	20,628,000
	Wool (Sheep's) ..	5,600,	6,653,	5,796,
	Silk	3,564,	9,486,	4,501,
	Flax	1,465,	2,065,	1,568,
	Hemp	876,	821,	891,
	Indigo	1,380,	1,558,	2,004,
		35,176,000	43,147,000	35,388,000
" " <i>Various.</i>	Hides	1,272,000	2,649,000	4,605,000
	Oils	1,961,	2,194,	2,088,
	Metals	2,139,	2,347,	2,026,
	Tallow	1,087,	1,390,	1,192,
	Timber	2,523,	3,691,	3,151,
		8,982,000	12,271,000	13,062,000
" " <i>Agricult.</i>	Guano	2,976,000	1,268,000	1,661,000
	Seeds	1,027,	1,238,	1,601,
		4,003,000	2,506,000	3,262,000
TROPICAL, &C., PRODUCE.	Tea	3,301,000	3,346,000	3,279,000
	Coffee	1,221,	946,	943,
	Sugar & Molasses	8,326,	11,366,	7,900,
	Tobacco	696,	927,	596,
	Rice	1,108,	957,	1,151,
	Fruits	184,	382,	96,
	Wine	1,391,	2,642,	2,005,
	Spirits	754,	2,107,	1,247,
		16,981,000	22,673,000	17,217,000
FOOD	Grain and Meal..	14,066,000	11,667,000	13,772,000
	Provisions	2,184,	2,964,	3,097,
		16,250,000	14,631,000	16,869,000
Remainder of Enumerated Articles		1,810,000	2,655,000	2,171,000
TOTAL ENUMERATED IMPORTS....		83,202,000	97,883,000	84,969,000
Add for UNENUMERATED IMPORTS (say)		20,800,000	24,471,000	21,242,000
TOTAL IMPORTS.....		104,002,000	122,354,000	106,211,000

EXPORTS.—(United Kngdm.)—First Nine Months (Jan.—Sept.,) 1858-7-6.
Declared Real Value of Articles of British and Irish Produce and Manufactures Exported.

(First Nine Months.) BRITISH PRODUCE, &c., EXPORTED.		1858.	1857.	1856.
		£	£	£
MANURES.—Textile.	Cotton Manufactures..	24,212,000	23,434,000	21,689,000
	„ Yarn	7,009,	6,682,	5,896,
	Woollen Manufactures	7,278,	8,824,	7,331,
	„ Yarn	2,097,	2,361,	2,052,
	Silk Manufactures ...	1,362,	2,243,	1,957,
	„ Yarn	140,	301,	223,
	Linen Manufactures...	3,000,	3,640,	3,530,
	„ Yarn	1,261,	1,259,	943,
		46,359,000	48,744,000	43,621,000
	„ Sewed. Apparel	1,359,000	1,583,000	1,254,000
	Haberd. and Millnry	2,620,	3,261,	2,777,
		3,979,000	4,844,000	4,031,000
METALS	Hardware and Cutlery	2,372,000	3,050,000	2,664,000
	Machinery	2,723,	2,911,	1,901,
	Iron	8,817,	10,760,	9,866,
	Copper and Brass.....	2,063,	2,383,	1,922,
	Lead and Tin	1,710,	2,133,	1,759,
	Coals and Culm	2,437,	2,449,	2,179,
		20,122,000	23,636,000	20,291,000
Ceramic Manufcts.	Earthenware and Glass	1,303,000	1,663,000	1,401,000
Indigenous Manfrs.	Beer and Ale	1,447,000	1,237,000	1,120,000
	Butter	382,	441,	502,
	Cheese	62,	88,	100,
	Candles	126,	224,	230,
	Salt	240,	284,	294,
	Spirits	158,	654,	702,
	Soda	587,	589,	436,
		3,002,000	3,517,000	3,384,000
Various Manufcts.	Books, Printed.....	284,000	323,000	300,000
	Furniture	194,	214,	138,
	Leather Manufactures	1,505,	1,769,	1,189,
	Soap	160,	186,	214,
	Plate and Watches ...	333,	385,	327,
	Stationery.....	581,	553,	520,
		3,057,000	3,430,000	2,688,000
	Remainder of Enumerated Articles	2,575,000	3,027,000	3,254,000
	Unenumerated Articles	5,913,	6,875,	6,236,
	TOTAL EXPORTS	86,310,000	95,736,000	84,906,000

SHIPPING.—FOREIGN TRADE.—(United Kingdom.)—First Nine Months (Jan.—Sept.) of the Years 1858, '57, and '56. Vessels Entered and Cleared with Cargoes, including repeated Voyages, but excluding Government Transports.

(First Nine Months.) ENTERED :—	1858.			1857.		1856.	
	Vessels.	Total Tonnage.	Average Tonnage.	Vessels.	Total Tonnage.	Vessels.	Total Tonnage.
<i>Vessels belonging to—</i>	No.	Tons.	Tons.	No.	Tons.	No.	Tons.
United Kingdom and Dependencies	13,944	3,756,025	269	13,652	3,936,928	13,063	3,657,462
Russia	143	40,983	287	108	24,059	74	15,516
Sweden	546	86,641	159	402	67,496	391	67,871
Norway	1,646	351,272	213	1,573	328,019	1,659	321,715
Denmark	1,724	171,681	100	1,980	189,063	1,485	134,736
Prussia and other German States	2,303	516,646	224	2,705	501,752	2,234	405,450
Holland and Belgium ..	969	148,125	153	1,108	185,478	1,051	160,492
France	2,030	172,693	85	753	58,103	647	39,411
Spain, Portugal, and Italy	777	198,145	255	507	124,996	417	90,313
Other European States ..	97	25,108	259	17	3,147	57	15,816
United States	1,042	966,627	928	940	913,795	1,078	1,027,961
Other States, America, Asia, and Africa	15	5,805	387	21	8,761	19	6,249
Totals Entered	25,236	6,439,751	255	23,766	6,343,617	22,175	5,942,992
CLEARED :—							
United Kingdom and Dependencies	18,615	4,625,180	248	19,714	4,867,193	18,839	4,502,215
Russia	161	49,455	307	137	31,812	57	11,604
Sweden	639	112,211	176	544	103,132	470	87,379
Norway	1,070	204,136	191	1,342	260,172	1,395	257,429
Denmark	2,215	220,589	100	2,429	240,635	2,014	185,234
Prussia and other German States	3,768	656,777	174	3,529	591,130	3,118	512,528
Holland and Belgium ..	1,613	262,134	162	1,619	297,370	1,391	223,619
France	3,369	354,540	105	3,357	358,076	3,069	289,763
Spain, Portugal, and Italy	956	257,386	269	828	229,342	503	111,970
Other European States ..	120	32,081	267	12	4,303	79	23,057
United States	1,065	1,002,252	941	1,011	973,315	1,183	1,109,985
Other States, America, Asia, and Africa	12	4,319	360	14	4,891	21	7,933
Totals Cleared	33,603	7,781,060	232	34,536	7,961,371	32,139	7,322,716

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.
 —(United Kingdom.)—*Computed Real Value for the First Nine Months*
(Jan.—Sept.) of the Year 1858.

(First Nine Months. 1858.)	Gold.	Silver.	TOTAL.
IMPORTED FROM :—	£	£	£
Russia, Hanse Towns, Holland, and Belgium.....	2,238,000	464,000	2,702,000
France.....	609,	1,290,	1,899,
Portugal, Spain, and Gibraltar	169,	421,	590,
Malta, Turkey, and Egypt.....	968,	13,	981,
West Coast of Africa	82,	8,	90,
China	35,	86,	121,
Australia	6,277,	1,	6,278,
British Columbia	4,	....	4,
Mexico, South America and W. Indies	3,102,	2,260,	5,362,
United States	3,761,	141,	3,902,
Other Countries	44,	36,	80,
Totals Imported	17,289,000	4,720,000	22,009,000
EXPORTED TO :—			
Hanse Towns, Holland, and Belgium....	217,000	1,140,000	1,357,000
France.....	7,637,	300,	7,937,
Portugal, Spain, and Gibraltar	95,	....	95,
India and China (via Egypt)	113,	3,494,	3,607,
South Africa	64,	3,	67,
Mauritius.....	107,	26,	133,
Danish West Indies	9,	73,	82,
United States	135,	....	135,
Brazil	236,	97,	333,
Other Countries ..	15,	31,	46,
Totals Exported	8,628,000	5,164,000	13,792,000

REVENUE.—QUARTER ENDED 30TH SEPT., 1858.

An Abstract of the Net Produce of the REVENUE of the United Kingdom in the YEARS and QUARTERS ended on the 30th Sept., 1858 and 1857.—(Continued from page 363, ante.)

YEARS ended 30th Sept.				
Sources of Revenue.	1858.	1857.	Increase.	Decrease.
	£	£	£	£
Customs	23,472,831	23,106,509	366,322	....
Excise	17,731,000	17,516,000	212,000	....
Stamps	7,728,343	7,346,223	382,120	....
Taxes.....	3,136,033	3,099,020	37,013	....
Property Tax.....	7,852,625	15,753,024	....	7,900,399
Post Office.....	3,025,000	2,930,000	95,000	....
Crown Lands.....	276,940	277,654	....	714
Miscellaneous	1,938,727	1,147,231	791,496	....
Totals	65,161,499	71,175,661	1,883,951	7,901,113
			Net Decr. £6,017,162	

QUARTERS ended 30th Sept.				
Sources of Revenue.	1858.	1857.	Increase.	Decrease.
	£	£	£	£
Customs	6,115,422	5,481,385	634,037	....
Excise	5,085,000	5,298,000	....	213,000
Stamps	1,831,000	1,752,255	78,745	....
Taxes.....	141,000	159,000	....	18,000
Property Tax.....	2,454,000	4,931,537	....	2,477,537
Post Office.....	745,000	730,000	15,000	....
Crown Lands.....	60,940	60,654	286	....
Miscellaneous	531,690	269,438	262,252	....
Totals	16,964,052	18,682,269	990,320	2,708,537
			Net Decr. £1,718,217	

REVENUE (UNITED KINGDOM).—QUARTER ENDED 30TH SEPT., 1858 :—APPLICATION.

An Account showing the REVENUE and other RECEIPTS of the QUARTER ended the 30th of Sept., 1858; the Application of the same, and the Charge of the Consolidated Fund for the said Quarter, together with the Surplus or Deficiency upon such Charge.

Surplus Balance beyond the Charge of the Consolidated Fund for the Quarter ended 30th June, 1858, viz.:—	£	Amount applied out of the Income for the Quarter ended 30th Sept., 1858, to Redemption of Exchequer Bills (Deficiency) for the Quarter ended 30th June, 1858	£
Great Britain .....	..	Amount Applied out of the Income to Supply Services in the Quarter ended 30th Sept., 1858	1,735,000
Ireland	£416,064	Charge on the Consolidated Fund for the Quarter ended 30th Sept., 1858, viz.:—	9,486,063
Income received in the Quarter ended 30th Sept., 1858, as shown in page 486	416,064	Interest of the Permanent Debt	28,524,049
Amount received in the Quarter ended 30th Sept., 1858, in repayment of Advances for Public Works, &c.	427,049	Terminable Debt	1,480,325
17,807,148		Interest of Exchequer Bills (Deficiency)	Nil.
		The Civil List	101,259
		Other Charges on Consolidated Fund	373,799
		Advances for Public Works, &c.	268,813
			7,697,945
Balance, being the Deficiency on 30th Sept., 1858, upon the charge of the Consolidated Fund in Great Britain, to meet the Dividends and other Charges payable in the quarter to 30th December, 1858, and for which Exchequer Bills (Deficiency) will be issued in that Quarter	1,194,867	Surplus balance beyond the charge of the Consolidated Fund for the Quarter ended 30th Sept., 1858, viz.:—	
		Great Britain	88,081
		Ireland	—
			88,081
			£19,002,006

CORN.—Gazette Average Prices, (ENGLAND AND WALES,) during each Week of the Third Quarter of 1858; together with the MONTHLY and QUARTERLY Average.

[Communicated by H. F. JADIS, Esq., Comptroller of Corn Returns.]

Weeks ended Saturday, 1858.		Weekly Average. (Per Impl. Quarter.)					
		Wheat.	Barley.	Oats.	Rye.	Beans.	Pears.
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1858.—July	3.....	42 8	30 8	26 11	33 2	42 4	43 4
"	10.....	43 4	30 11	26 8	33 11	42 8	44 8
"	17.....	45 8	30 4	26 5	30 8	43 8	44 5
"	24.....	46 4	29 9	27 11	35 4	44 4	44 11
"	31.....	46 8	30 6	28 5	31 2	45 8	43 7
Average for July, 1858 ...		44 7	30 2	26 11	31 10	43 5	43 11
1858.—August	7.....	44 10	31 8	27 6	31 9	45 7	43 9
"	14.....	45 2	31 8	28 8	35 4	46 7	43 11
"	21.....	45 1	33 7	27 9	35 10	46 10	44 8
"	28.....	42 6	34 6	27 10	34 -	47 8	43 8
Average for Aug., 1858....		44 4	32 7	27 10	34 2	46 8	43 10
1858.—September	4.....	45 3	34 -	27 8	34 6	46 7	45 1
"	11.....	45 1	35 2	26 7	33 9	45 9	44 7
"	18.....	44 11	36 1	25 8	34 6	46 8	45 1
"	25.....	44 2	36 6	25 1	32 7	45 9	43 10
Average for Sept., 1858....		44 10	35 5	25 10	33 10	46 1	44 7
Average for the Quarter ...		44 7	32 6	26 10	33 2	45 8	44 1

LONDON STOCK AND SHARE MARKETS.—JULY, AUG., SEPT., 1858.

Stocks and Railway Shares.	Amt. of Share.	Amt. Paid.	PRICE ON THE			Highest Price during			Lowest Price during		
			1 July.	9 Aug.	1 Sept.	July.	Aug.	Sept.	July.	Aug.	Sept.
Consols.....	...	...	95½	96	96½	96½	97	98½	94½	95½	96½
Exchequer Bills .....	...	...	18s. pm.	23s. pm.	22s. pm.	26s. pm.	26s. pm.	28s. pm.	16s. pm.	20s. pm.	22s. pm.
Brighton	Stock	100	107½	108½	109½	110	110	110½	106½	107½	108½
Caledonian	"	"	72½	79½	83	79	84	88½	70½	78½	82½
Eastern Counties	"	"	59½	63½	60	63½	63½	63½	58½	60½	55½
Great Northern	"	"	99	104½	98½	104½	104½	104½	98½	99	98½
Great Western	"	"	50	50	50	51½	51½	54½	48½	48½	49½
London & North-Western	"	"	84½	94	88½	93½	94	92½	88½	90½	87½
Midland	"	"	89½	95	95	94½	97½	96½	89½	94½	94½
Lancashire and Yorkshire	"	"	88½	91½	93	92½	94½	96½	89½	90½	92½
Sheffield	"	"	36½	35½	33	37½	34½	36	34	33½	32½
South-Eastern	"	"	66	70½	69½	70½	73½	73½	65	70½	68½
South-Western	"	"	91½	92½	92½	95	94½	96½	91	92	94½
Berwick	"	"	89	93	91	92½	95	95½	88½	92½	89½
York and North Midland..	"	"	69	74½	71½	74	75½	78	69½	72½	70½
Northern of France.....	16	All.	36	36½	38½	36½	38	40½	35½	36½	38
East Indian	Stock	100	101½	106	105	106½	106½	106½	100½	104½	104½

* With Dividend.

† Ex-Dividend.

BANK OF ENGLAND.—WEEKLY RETURN.

An Account, pursuant to the Act 7th and 8th Victoria, c. 32, for each Week ending on a Wednesday, during the Third Quarter (July—Sept.) 1858.

1.	2.	3.	4.	5.	6.	7.
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.	DATES.	Assets.			Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.	(Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.		
Mins. £	1858.	Mins. £	Mins. £	Mins. £	Mins. £	1858. Per Cent.
31,20	July 7	11,01	3,46	16,73	20,53	11 Feb. 3
30,72	" 14	11,01	3,46	16,25	20,78	
30,99	" 21	11,01	3,46	16,52	20,60	
31,02	" 28	11,01	3,46	16,65	20,41	
31,13	Aug. 4	11,01	3,46	16,66	20,81	
31,01	" 11	11,01	3,46	16,54	20,59	
31,19	" 18	11,01	3,46	16,72	20,42	
31,42	" 25	11,01	3,46	16,95	20,36	
31,53	Sept. 1	11,01	3,46	17,06	20,29	
31,77	" 8	11,01	3,46	17,30	20,01	
32,43	" 15	11,01	3,46	17,96	20,15	
32,88	" 22	11,01	3,46	18,41	20,02	
33,10	" 29	11,01	3,46	18,63	20,50	

BANKING DEPARTMENT.

8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
Liabilities.					DATES.	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.	(Wednesdays.)	Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	1858.	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £
14,55	3,21	6,99	13,16	,81	July 7	10,69	16,68	10,67	,68	38,72
14,55	3,26	2,53	15,62	,84	" 14	10,59	15,62	9,94	,65	36,80
14,55	3,30	2,81	15,71	,80	" 21	10,59	15,50	10,39	,69	37,17
14,55	3,30	3,64	15,05	,80	" 28	10,59	15,44	10,61	,71	37,35
14,55	3,41	4,10	14,32	,79	Aug. 4	10,77	15,40	10,32	,68	37,17
14,55	3,41	4,67	13,90	,77	" 11	10,87	15,32	10,42	,70	37,31
14,55	3,42	5,10	13,70	,79	" 18	10,88	15,19	10,77	,72	37,56
14,55	3,38	5,45	13,55	,78	" 25	10,88	15,06	11,06	,70	37,70
14,55	3,69	5,63	13,67	,79	Sept. 1	10,91	15,45	11,24	,73	38,33
14,55	3,69	7,54	12,27	,77	" 8	10,96	15,36	11,76	,74	38,82
14,55	3,70	8,04	12,20	,76	" 15	10,97	15,31	12,28	,69	39,25
14,55	3,70	8,74	12,05	,76	" 22	10,98	15,23	12,86	,73	39,80
14,55	3,70	8,89	11,54	,80	" 29	10,98	15,24	12,60	,66	39,48

CIRCULATION.—COUNTRY BANKS.

Average amount of Promissory Notes in Circulation in ENGLAND and WALES, for each Week ended on a Saturday during the Third Quarter (Sept.—Dec.) of 1858; and also the Average of Promissory Notes in Circulation in SCOTLAND and IRELAND during the Four Weeks ended on the 3rd July, the 31st July, the 28th Aug., and the 28th Sept., 1858.

ENGLAND AND WALES.				SCOTLAND.				IRELAND.		
DATE.	Private Banks. (Fixed Issues, 4-40.)	Joint Stock Banks. (Fixed Issues, 3-30.)	TOTAL. (Fixed Issues, 7-70.)	Four Weeks, ended	£ and upwards.	Under £.	TOTAL. (Fixed Issues, 3-00.)	£ and upwards.	Under £.	TOTAL. (Fixed Issues, 6-35.)
1858.	Mins. £	Mins. £	Mins. £	1858.	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £	Mins. £
July 3	3,22	2,75	5,97	July 3	1,48	2,46	3,94	3,05	2,79	5,84
" 10	3,26	2,78	6,04							
" 17	3,23	2,78	6,01							
" 24	3,18	2,72	5,90							
" 31	3,14	2,68	5,82	" 31	1,37	2,41	3,78	3,05	2,70	5,75
Aug. 7	3,13	2,67	5,80							
" 14	3,12	2,67	5,79							
" 21	3,12	2,69	5,81							
" 28	3,13	2,70	5,83	Aug. 28	1,32	2,40	3,72	2,96	2,70	5,66
Sept. 4	3,17	2,73	5,90							
" 11	3,20	2,77	5,97							
" 18	3,24	2,83	6,07							
" 25	3,29	2,89	6,18	Sept. 25	1,39	2,49	3,88	3,02	2,90	5,92

BALLINASLOE CATTLE AND HORSE FAIR, OCT. 1858.

The official return of the Cattle sold, and the numbers unsold, at the close of the fair is as follows:—Sold: Oxen, 14,190; two-years old, 891; yearlings, 272; total, 15,353. Unsold: Oxen, 3,169; two-years old, 3,306; yearlings, 685; total, 7,160.

Subjoined is a return of the gross numbers of Cattle of all kinds sold and unsold for the last nine years:—

	Sold.	Unsold.	Total.		Sold.	Unsold.	Total.
1850	9,395	6,400	15,795	1855	16,237	3,803	20,045
1851	11,277	2,228	13,605	1856	16,540	5,982	22,522
1852	12,090	645	12,735	1857	16,441	949	17,390
1853	12,249	2,538	14,832	1858	15,353	7,160	22,513
1854	15,570	2,839	18,409				

The correspondent of the "Freeman's Journal," writing on Friday evening, thus sums up the results of the fair:—"The supply of Sheep was in excess of last year to the enormous extent of in round numbers 20,000. The demand for ewes was maintained throughout, and last year's prices realised, but wethers seemed to be at a discount, and went off slowly at a reduction of several shillings, large numbers remaining unsold after the second day of the fair had concluded. There was a scanty supply of first-class Horses, and inquiries were made in vain for them. Good prices would have been given for hunters, carriage horses, and chargers, if they were on the green, but they could not be found, and many of the principal dealers having commissions went away disappointed. Inferior horses were plenty, but the sales were few and unimportant. Horned Cattle of all sorts were down from 11. 10s. to 21. 5s. as compared with the prices of 1857, and many herds were kept over by feeders, who would not sell at the current prices of the market."

INDEX TO VOL. XXI.

	PAGE
AGLAND'S (Dr.), account of the Typhoid Fever at Great Horwood	475
AGES of the Population in Liverpool and Manchester (see <i>Danson</i>)	87
AGRICULTURAL PRODUCE, Prices of, in 16th—18th centuries (see <i>Robinson</i>)	369
APPRENTICESHIP SYSTEM, in reference to the freedom of labour (see <i>Napier</i>)	94
— evils of	94-5, 97
AUTRIA, notice of judicial Statistics, cadastre, &c.	4-6
 BAKER (Robert). <i>On the Industrial and Sanitary Economy of the Borough of Leeds in 1858</i>	427
Topographical divisions of the borough	427
Descriptions of the out-townships, origin of their names, population, &c.	427-9
Tables of area, houses, and population, 1841-58	430-53
Movements and local increase of population	433
Relative longevity, sanitary improvements, &c.	433-4
Woollen, worsted, flax, and silk trades	434-8
Staple trades of Leeds	435
Processes, details, and wages of the woollen manufacture	435-6
Worsted trade, its decline, flax, silk, and dyeing	436-8
Iron and machine-making trades, persons employed, and wages	438
Paper, Tobacco, and Pottery trades	439-40
Account of the Wortley clay, and its uses	439-40
Chemical, Coal, and Leather trades	440-3
Amount of wages paid in all the trades	443
Pauperism and savings' banks—causes of the first, and remedies	443
 BANK OF ENGLAND. weekly account of the issue and banking departments : Fourth quarter, 1857 . 113 | Second quarter, 1858 . 367 First quarter, 1858 . 221 | Third quarter, 1858 . 489	
BANKS (COUNTRY), amounts of promissory notes in circulation (in Great Britain) : Fourth quarter, 1857 . 114 | Second quarter, 1858 . 368 First quarter, 1858 . 222 | Third quarter, 1858 . 490	
BANKS (LONDON JOINT STOCK), abstract of half-year's Reports of, June, 1858	368
BRACEBRIDGE (Charles H.). <i>Notes on Self-supporting Dispensaries, with some statistics of the Coventry Provident Dispensary</i>	460
Establishment of a central Society for information on their principles	460
Advantages of the dispensaries	461
Statistical analysis of the Reports of the Coventry Dispensary, 1831-57	463
BRAIN, apprehension of overworking the, in competitive examinations groundless	34
— no effects of ditto from severe study in the Polytechnic School at Paris	34
BRITISH ASSOCIATION (Section F). <i>Economic Science and Statistics, List of Papers read, September, 1858</i>	468-9

	PAGE
BROWN (Samuel). <i>Report on the International Statistical Congress, held at Vienna, September, 1857</i>	1
Great recent increase in the range of statistical inquiries	1
Programme of subjects of inquiry	2-9
— Mortality, statistics of: Causes of death,—Societies for the sick and infirm,	2-3
— Statistics of insane, (Dr. Riedel and Dr. Seligmann.)	2-3
— judicial statistics: proposals of forms for the comparison of the penal laws, civil law, and law of real property in different countries	3-5
— — notice of ditto relative to Austria	4-6
— — the cadastre and land registers of divisions of the Austrian empire	6
— financial statistics: sources of error in the comparison of different states.	6-7
— statistics of industry: difficulty in classifying raw materials distinct from industrial products, values of ditto, &c.	7-8
— statistics of public instruction	9
— relation of statistics with the natural sciences, ethnography, &c.	9
Proceedings of the session, resolutions adopted, &c.	10-12
Thoughts on the proposed Congress in London in 1859	12
Appendix A, Dr. Farr's Report on the progress of government statistics in Great Britain	13
— B, Dr. Farr's invitation to hold the congress of 1859, in London	16
BULLION and specie, gold and silver, imported and exported :	
Jan.—March, 1858 217	Jan.—Sept., 1858 485
Jan. June, 1858 362	
CADASTRE and land registers of Austria	6
CALENDAR of the Church, computation of the Poor by, in Yorkshire	413 (note)
CANALS in N. W. Provinces of India, length, revenues, &c.	130-6
CATTLE FAIR , Ballinasloe, October, 1858	490
CRESSPOOLS , injurious effects of, in Paris	203
— Dr. Barker's experiments on injurious emanations from	208-9
— excess of mortality in Liverpool, caused by	476-7
CHADWICK (Edwin). <i>On the economical, social, educational, and political influences of Competitive Examinations, as tests of qualifications for admission to the junior appointments in the Public Service</i>	18
Introduction: statement of politico-economical advantages to be derived from competitive examinations	18-19
State of the question: numbers examined, rejected, &c.	19-23
— large number rejected for deficiencies in spelling and arithmetic	20, 34
— higher attainments of successful competitive candidates, than of nominated ones	20
— large number still nominated to clerkships	21-2
Indian Civil Service,—Evidence of Sir Charles Trevelyan	23-30
Evil of sending out to India, with great power over natives, the professed idlers of Haileybury	24, 29
Necessity for the maintenance of our power in India; of high character and education in the Civil Servants	25-6
Evil effects of patronage appointments connected with the House of Commons	27 (note)
— illustration of ditto relative to the Board of Admiralty	28 (note)
— ditto, in army before Sebastopol	29 (note)
Open competition: experience in France of its beneficial effects, &c.	31
Apprehensions of consequences of overworking the brain, groundless	34
No inferiority of physique from severe study in the Polytechnic School	34
The competitive examinations not carried out as supposed by the public	35-7
Social position of nominated candidates	36
Beneficial effects to the unsuccessful competitors	36
Calculation of probable annual vacancies in the Civil Service	37
Large number of rejections in the East India past examinations	37-8
Illustrative cases of the benefits resulting from competitive examinations	38-40
Evidence afforded by founders' endowments in Scotland	41-5
Important collateral benefits in private employments	45-7
Rapid increase of marriages among the female school teachers from the Government Schools of Art	47
Cases of discovery of rare aptitude in obscure places	47
Extracts from early statutes on the competency necessary in appointments to offices	48 (note)
Opinions of J. S. Mill on the importance of the question	49
Note of the Discussion on this paper, and Minute of the Committee of Section F	50-1
CHRONICON PRETIOSUM , Snathense (see <i>Robinson</i>)	369
CIVIL SERVICE , calculation of probable annual vacancies in	37
— extracts from early statutes on the necessary competency for appointments	48 (note)
— of India (see <i>India</i>)	

	PAGE
CLAY (Wortley), account of its uses	439-40
CONGRESS, International Statistical, at Vienna, Sept., 1857, Report, (see <i>Brown</i>)	1
— programme of subjects of inquiry	2-9
— proceedings, of the session, &c.	10-12
— International de Bienfaisance, at Frankfort, 1857, proceedings of	339
CONSOLS (see <i>Stock market</i>)	
CORN, average weekly prices (with monthly and quarterly averages) :	
Fourth quarter, 1857 112	Second quarter, 1858 366
First " 1858 220	Third " 1858 488
CORR van de Maeren (see <i>Maeren</i>)	
COTTON, comparative duties on, in Switzerland and Belgium	457-8
" CREDIT MOBILIER," recent history of (see <i>Newmarch</i>)	444
— particulars of its establishment, capital, and objects	444
— its large profits and success to 1855, and subsequent decline	446-49
— its real nature as a stock-jobbing association, &c.	450-3
CRIME, laws of, predicted with greater certainty than those of disease and death	75
CRIMEAN WAR, evil effects of patronage appointments on the army in	29 (note)
DANSON (J. T.). <i>On the Ages of the Population in Liverpool and Man- chester</i>	87
The number of Males between the ages of 35 and 55 a numerical expression of the ruling and protecting power of society	87
Relative number of the sexes at different periods of life	87
Proportions of Females and immature and aged Males to every 100 productive Males in the United Kingdom, Manchester, and Liverpool	88-90
Deficiency of ditto in the latter two	88-91
Important effects in increased experience from lengthening the duration of life Tables of ages in England and Wales, and in Manchester and Liverpool	91 92-3
DEATHS (see <i>Mortality</i>)	
DIPHTHERIA, notice of epidemic of	208
DISEASES, increase of those of lungs and heart in cold weather, as com- pared with those of the brain	59 (note)
— tubercular, small fluctuations in deaths from	59-60
— tables of comparison of, with crime	71-5
DISPENSARIES, on self-supporting (see <i>Bracebridge</i>)	460
DISPENSARY (COVENTRY PROVIDENT), statistical analysis of its reports, 1831-57	462
EDUCATION, notice of statistics of public	9
ELY, notice of improved sanitary measures at, since 1851	475-6
EXAMINATIONS (COMPETITIVE) for the Public Service, economical, social, educational, and political, influence of (see <i>Chadwick</i>)	18
— large number rejected in, for deficiencies in spelling and arithmetic	20, 34
— experience and beneficial effects of, in France	31
— collateral beneficial effects to the unsuccessful competitors in private employment, &c.	36, 45-7
— illustrative cases of benefits resulting from	38-40
EXPORTS, United Kingdom :	
Jan.-March, 1856-8 215	Jan.-Sept., 1856-8 483
Jan.-June, 1856-8 860	
FARR (Dr.). Report on the progress of Government statistics	13
— Speech on proposed Congress in London in 1859	16
FIBRES, notes on Indian (see <i>Sadler</i>)	454
FINANCE, fiscal conditions of Indian, compared with British	258-69
FINANCIAL STATISTICS, sources of error in comparison of	6-7
FINANCIAL SYSTEM of Emperor Akbar in 16th century, errors of	258-9
FLAX in India, advantages of its cultivation	456

	PAGE
FLUCTUATIONS (annual) in deaths from various diseases, compared with those in crime, &c. (see <i>Guy</i>)	52, 57-9
— reduction of rate of, in increase of numbers of facts	55-6
— small, in deaths from tubercular diseases	84, 86
— <i>table of</i> , from various causes of death, 1840-54 (and analysis)	59-60
— <i>ditto</i> , <i>ditto</i> , 1848-54	61-5
— <i>ditto</i> , zymotic diseases (highest), violent deaths (lowest)	66-8
— in deaths due to moral causes less than from zymotic diseases	68-70
— in weather less than in disease and crime	72-5
— in prices of cereals, greater than in disease and crime	76
FRANCE , population of, comparative view of, with that of England (see <i>Willich</i>)	78-9
— <i>tables of ditto</i>	297
FREE TRADE , progress on the Continent (see <i>Maeren</i>)	301-7
GLASGOW , comparative view of Wages in, in 1851, 56, and 58 (see <i>Strang</i>)	457
— Sewing Machine in, its effects on Wages, &c. (see <i>Strang</i>)	421
GUY (William A.). <i>On the annual Fluctuations in the number of deaths from various diseases, compared with like fluctuations in crime, and in other events within and beyond the control of the human will</i>	464
Notice of a previous paper on the Fluctuations of Births, Deaths, and Marriages in the Metropolis (vol. xviii. p. 513)	52
The fluctuations of ditto shown to be consistent results of causes acting in combination, (examples from sex, age, and locality)	53
Proportionate fluctuations in Marriages to Births and Deaths in London as $\frac{3}{4}$ to 9 and 9, and in England as $\frac{3}{4}$ to 9 and $\frac{5}{4}$	52-4
Reduction of the rate of fluctuation in increase of number of facts shown in <i>Table of Diseases</i>	54-5
Annual fluctuations in number of deaths from various diseases	55-6
Least fluctuation in deaths due to the misdirected operation of the human will	57-9
Great increase in diseases of the lungs and heart in cold weather, as compared with those of the brain	58
Small fluctuation in deaths from tubercular diseases	59 (note)
<i>Table of</i> fluctuations from various causes of death in 14 years, 1840-54	59-60
— analysis of ditto, in groups	61
— of ditto in 7 years, 1848-54	62-5
— analysis of ditto, and variations accounted for by improvements in medical diagnosis, &c.	66
— of special diseases, Zymotic diseases in highest rate of fluctuations, and violent and accidental deaths in lower rates	67-8
<i>Tables of</i> comparison of disease and crime in the Metropolis and in England, 1840-54 and 1848-54	68-70
Fluctuations in deaths due to moral causes, less than in those from zymotic diseases	71-5
Laws of crime may be predicted with greater certainty than those of disease and death	72-5
<i>Table of</i> the weather compared with disease and crime, showing less fluctuation in the former	76
The numerous antecedent causes and agents in each single event	77
<i>Table of</i> prices of cereals compared with disease and crime, showing greater fluctuation of the former	78
— of prices of stocks and ditto	78-9
— of miscellaneous events and facts (highest fluctuation, tonnage of steam vessels, lowest, College of Surgeons' students).	79
Singular regularity and freedom from fluctuation in all large collections of facts	80-3
Reasons why the real nature of the human will cannot be inferred from figures	83
General conclusions	83-4
Example of the decrease of fluctuation in increase of facts	85-6
HEALTH , state of the public :	86
Quarter Dec., 1857	102
Quarter June, 1858	351
Mar., 1858	206
Sept., 1858	473
HENDRIKS (Frederick). <i>On the Statistics of Indian Revenue and Taxation</i>	223
Causes of the apathy on subjects relative to Indian Administration	223
Statement of the heads of inquiry, and errors of generalization to be avoided	224-5
Present condition of the Indian revenue, pressure of taxation, and area and population from which raised	225-41

HENDRIES (Frederick). *Statistics of Indian Revenue—continued.*

<i>Table of total revenue in each Presidency, and in the whole of British India, in 1855-6</i>	326
— of per centages of ditto from each source	328
<i>Inquiry into the nature of the Land Tax of India</i>	329-33
<i>The Land Tax a rent and not a tax</i>	329, 33
<i>Large recent reforms in Indian Land Revenue Collection, with constant reduction of taxation, and consideration for the landholders</i>	330-1
<i>Great reduction of the supposed taxation per head, by withdrawing the item of Land-tax</i>	333
<i>Salt duties: the most really individual form of taxation</i>	333
<i>Table of the area and population of India, and comparison of ditto with the Kingdoms of Europe</i>	334-5
<i>Comparative density of population, per square mile, in India and England</i>	336
<i>Table of indirect and direct taxation of India, 1855-6</i>	337
<i>Average taxation per head in India, one shilling, and in Great Britain, fifty shillings</i>	338-9
<i>Table of ditto, and of average amount of revenue raised by taxation in India</i>	339-41
<i>Productive, financial, and industrial condition of the country and people of India</i>	341-58
<i>Ancient and still existing exhaustive social condition of India, and means of improvement by promotion of agriculture, public works, &c.</i>	341-3
<i>Items of the expenditure of the government of India, average of, 1854-7</i>	343
<i>Experience already gained of benefit from expenditure on railways, Government works, &c.</i>	344-8
<i>Tables and Summaries of the public debts of the Presidencies and home debts of the East India Company</i>	348-255
<i>Increase of revenue since 1834, 17 per cent. greater than the increase of the interest on the debt</i>	355-6
<i>Deficits in revenue since 1853, more than accounted for by expenditure on public works</i>	356
<i>Fiscal conditions of Indian, compared with those of British finance</i>	358-69
<i>Number of Europeans in the East India Company's Service in 1851, 40,000</i>	358 (note)
<i>Errors of the financial system of the Emperor Akbar, in the 16th century</i>	358-9
<i>Table of parallelisms of the Indian (Mahomedan), and the English system of revenue and taxation</i>	360-3
<i>Excessive and indiscriminate taxation of the Punjab, under Runjeet Sing</i>	363
<i>Table of taxes repealed in Sind by Sir C. Napier, 1843-6</i>	364
<i>Account of the Indian Land-tax, and supposed rights of proprietorship of military conquerors</i>	364-6
<i>Improvident character of Lord Cornwallis's measure for settling the permanent amount of Land-tax</i>	366-7
<i>Question of Land-tax redemption in Bengal, and its probable benefits</i>	368-9
<i>Facts and statistics on the history and progress of revenue and taxation in British India, during 1792-1856</i>	370-88
<i>Voluminous character of the returns, and notice of the best House of Commons' papers, for the summary study of Indian revenue statistics</i>	370-1
<i>Tables and Summaries of average annual revenue and per-centage proportions, in periods of five years, &c., during 1792-1856</i>	372-77
— notes on the items in ditto	378-88
<i>Land-tax, average annual amount, and rate per cent., of revenue</i>	378
<i>Sayer Revenue, Excise, and Moturpha (Income and Property-tax)</i>	379-81
<i>Case of wealthy Zumeendar in Bengal, showing his freedom from taxation</i>	380-1
<i>Salt-tax, its universality, and special incidence on the poor</i>	381-3
<i>Opium revenue, question of its immorality, and opposing commercial advantages</i>	383-5
<i>Post-office, stamps, and customs</i>	386-6
<i>Mint duties, tobacco, and miscellaneous</i>	386-8
<i>Tables, area, population and land revenue of Bengal collectorates, 1855-6</i>	389-90
— ditto, North Western Provinces	391-2
— ditto, Madras	393
— ditto, Bombay	394
— ditto, Punjab	395
— ditto, summary	396
HUNTER's South Yorkshire, notice of	392
IMPORTS, United Kingdom :	
Jan.-Mar., 1856-8	214
Jan.-May, 1856-8	359
Jan.-Aug., 1856-8	432
INCOME TAX of India (Moturpha)	279-81
INDIA, tables of area, population and land revenue, 1855-6	289-96
— table of area and population, compared with European Kingdoms	284-5
— comparative density of population of, with that of England	286
— exhaustive social condition of, and means of improvement	241-3
— civil services of, evidence of Sir C. Trevelyan relative to appointment in	23-30

	PAGE
INDIA,—continued.	
— large number of rejections in the pass examinations for	37-8
— necessity of high character and education of the civil servants for	25-6
— number of Europeans in the East India Company's service in 1851, 40,000	258
— revenue and taxation statistics (see <i>Hendriks</i>)	223
— tables of revenue of each Presidency, in 1855-6, and sources of ditto.	226, 228
— the land-tax of, its nature, reform, and reduction, &c.	229-32
— table of indirect and direct taxation of, 1855-6	237
— see <i>Taxation</i> .	
— revenues, notice of the best House of Commons' papers for study of statistics of	270-1
— tables of average annual amounts, and notes on ditto, 1792-1856	272-88
— items of the expenditure of the government of	243
— tables of the public debts of the presidencies of, &c.	249-55
— notes on public works in (see <i>Sykes</i>)	121
— organization of Public Works' Department, 1852, &c.	122
— outlay on public works in, in four years, and in 1854-5	128, 137
— tables of expenditure on public works in	138-55
— roads and bridges made in 1853-5	128-9
— canals in north-western provinces, length, returns, &c.	130-6
INDUSTRIAL PRODUCTS , difficulty in classifying as distinct from raw materials	7-8
IRON and MACHINE making trades at Leeds	438
LABOUR , the apprenticeship system in reference to the freedom of (see <i>Napier</i>)	94
LAND TAX , (see <i>Tax</i> .)	
LAW , proposals for forms of judicial statistics of different countries	3-5
— notices of ditto, the Cadastre, &c., in Austria	4-6
LEEDS , industrial and sanitary economy of, in 1858 (see <i>Baker</i>)	427
— topographical divisions of the borough	427
— description of the townships, their names, population, &c.	427-9
— tables of area, houses, and population, 1841-58	430-33
— woollen, flax, silk, and other staple trades of	434-40
LIFE , duration of, important effects in increased experience from lengthening the average	91
LIVERPOOL , ages of the population in	87
— excess of mortality in, caused principally by its cesspools, &c.	476-7
LONDON , boundary line of the Metropolis 63 miles, including a space of 120 square miles	172
— description of, as comprised in Metropolis Management Act, 18 and 19 Vict.	169-71
— division of the Metropolis into portions, and character of the inhabitants of each	187-8
— remarkable irregularity in size of metropolitan parishes	184
— table of population of different portions of	309-10
— see <i>Poor relief</i> (Metropolitan)	
— (<i>CITY OF</i>) table of extent of parishes, population, poor expenditure, &c.	330-33
LUMLEY (W. G.). <i>On the present state of the Administration of the Relief to the Poor in the Metropolis, and the charge of the Poor Rate thereon</i>	169-97 308-38
— Description of the Metropolis as comprised in Act for its management, 18 and 19 Vict., c. 120	169-71
— Enumeration of parishes united with others for ecclesiastical purposes, or poor relief	171
— List of extra-parochial places not liable to the Poor Rate	171
— Boundary line of the Metropolis 63 miles, including a space of 120 square miles	173
— Subdivision of parishes into townships for better relief of the poor	173

LUMLEY, (W. G.). *Relief to the Poor in the Metropolis—continued.*

List of separations of parishes in London	173
Acts for the City of London in 1647-9, and subsequent alterations	173-5
Formation of Unions and Boards of Guardians since 1834	175-8
Ditto of Guardians for Parishes	177
Parishes governed by Local Acts	177
Formation of Pauper School Districts	179
Pauper Lunatics, number in the Metropolitan districts, &c.	180
Provisions for distribution of Relief and collection of Poor Rate	180
Number of officers, assistants, and servants in each Union and Parish	181
Amount of workhouse accommodation, 1857	182-3
The Labour test for able-bodied males	183-4
Machinery for collection of the Poor Rate	184
Progress of the charge for the relief of the poor	184-6
Remarkable irregularity in size of Metropolitan Parishes	184
Variation of Poor Rate in the City from 1½d. to 4s. 10½d.	185
Statutes for requiring Returns of the expenditure on the Poor since 1776	185-6
Division of the Metropolis into portions, and character of the inhabitants of each	187-8
Incidence of the charge upon these portions with reference to population	188
Ditto with reference to property	190
Ditto in regard to number of paupers	193
Sums expended, showing rate of increase and rate per head on the population, 1776-1856	189
Inequality of modes of rating in the different parishes	190-1
Comparison of Property Tax and Poor Rate Valuation, showing great inferiority of the latter	199
Rate in the pound, showing decrease from 1808 to 1859	192-3
Proportion of cost of relief to irremovable poor to total cost	195
Conclusions as to the probable settlement of proposed conflicting remedies	196

LUMLEY (W. G.). *On the present state of the Administration of the Relief to the Poor in the Metropolis, and the charge of the Poor Rate thereon*

	308
Table of Population of the different portions of the Metropolis	309-10
— of extent of parishes, inhabited houses, families, and number of houses rated to the poor	311-14
— Expenditure on relief of the poor, 1776-1856	315-17
— Property assessed to Property Tax, County Rate, and Poor Rate, 1808-16-57, rate in the pound, &c.	318-25
Tables of annual value of Real Property in Metropolis in 1857	326
— of number of paupers relieved in 1803, 1857, and 1858	327-9
— City of London Union, extent of parishes, their population, inhabited houses, poor expenditure, and rate in the pound, 1776-1857	330-33
— Metropolis, gross rental, net annual value—poor rate and pauperism	334-37
— State, in 1856, of St. Dunstan, Stepney, and St. Martin-in-the-Fields, compared with some larger parishes	338

LUNATICS (PAUPER) numbers in the metropolitan districts, &c.

180

MAEREN (COFF VAN DE). *On the Progress of Free Trade on the Continent*

457

Freedom of Switzerland from protective duties	457
Comparative duties on cotton in Switzerland and Belgium	457-8
The Governments of France and Belgium in favour of reduction of tariffs	458
Attempts of the manufacturers to re-establish the continental blockade against England	459

MANCHESTER, ages of the population in

87

MARRIAGES, greater fruitfulness of, in Great Britain than in France

298-9

— increase of, among female school teachers from the Government schools of art	47
— proportionate fluctuations in, to births and deaths in London	54-5

METEOROLOGICAL TABLES:

Dec. quarter, 1857	109	June quarter, 1858	358
March „ 1858	213	Sept. „ 1858	481

METEOROLOGY of England and Wales, by James Glaisher:

Dec. quarter, 1857	107	June quarter, 1858	356
March „ 1858	211	Sept. „ 1858	479

MILL (J. S.), opinions of, on the importance of Government competitive examinations

49

MORTALITY of England and Wales:

Autumn quarter, 1847-57	103	Spring quarter, 1848-58	352
Winter „ 1848-58	207	Summer „ 1848-58	474

See also *Registration*.

MORTALITY—continued.

— statement of the standard mortality, 17 in 1,000 per annum, causes of excess, and their removability	104-5
— on forms for statistics of	2
— annual fluctuations in, compared with fluctuations in crime, &c. (see <i>Guy</i>)	52

NAPIER (James Robert). *The Apprenticeship System, in reference to the freedom of Labour*

Evils of the apprenticeship system to the employer	94
Ditto to the employed in depressing ability, &c.	95
The idea that work is always better done by journeymen who have served their time, fallacious (with examples)	95-6
The system given up by the Americans, &c.	96
Its abandonment principally resisted by the employer's workmen who have served their time	97
Evils consequent on the system	97

NAVIGATION of Indian rivers by steam trains**NEWMARCH (William). *On the recent history of the Crédit Mobilier***

Error of its system	441
Particulars of its establishment in 1852, and its constitution, capital and proposed objects	444
Explanation of its mode of emission of "Obligations at Long Term," or small circulating notes bearing interest	445
Its large profits and success up to the end of 1855	446
A high rate of interest on "Continuations" of stocks and shares a chief source of its profits	447
Enumeration of its enormous advances to Railway and other Companies, and supposed infallibility of the combination	447-8
Decline in value of its shares, and declaration of no dividend at the close of 1857	448-9
Statement of its profits, and their decline	449
Real nature of the Society as a stock-jobbing association, and character of its promoters	450-1
Increased employment in France caused by excessive demand for French produce from the gold discoveries	452
Powerlessness for good of all attempts like this Company, not based on straightforward means	452-3

OPIMUM REVENUE of India, question of its immorality, and opposing commercial advantages**PATRONAGE APPOINTMENTS in the civil service, evil effects of****POLYTECHNIC SCHOOL of Paris, no inferiority of physique from severe study in the****POOR, present state of the administration of the relief to, in the Metropolis (see *Lumley*)**

— tables of ditto	169
— subdivision of parishes in London, for better relief of	308
— formation of unions and boards of guardians for, since 1834	172-3
— provisions for relief of, number of officers, workhouse accommodation, &c.	175-6
— pauperism at Leeds, its causes and remedies	180-3
— pauperism at Leeds, its causes and remedies	443

POOR RATE, charge of, in the Metropolis (see *Lumley*)

— list of extra-parochial places not liable to	169
— machinery for collection of, and the progress of	171
— variation of, in the City from 1½d. to 4s. 10½d.	134-6
— incidence of, upon different portions of the Metropolis	185
— inequality of, and comparison of property tax valuations with	187-93
— inequality of, and comparison of property tax valuations with	190-2

POPULATION of Great Britain, increase of, in 1857-8

— tables of the state of, in 1851, compared with that of France (see <i>Willck</i>)	99, 203
— proportion of Females and immature aged Males to every 100 productive Males	848, 471
— of Liverpool and Manchester, ages of (see <i>Danson</i>)	297, 801-7
— of Liverpool and Manchester, ages of (see <i>Danson</i>)	88-90
— of Liverpool and Manchester, ages of (see <i>Danson</i>)	87

POTTERY TRADE at Leeds

	PAGE
PRICES of provisions, average of consols, wheat, meat, &c., 1855	{ 101, 205 350, 473
— of agricultural produce at Snaith, in the West Riding of York- shire, in 16th-18th centuries (see <i>Robinson</i>)	369
— notice of publications containing information on	370 (note)
— tables of, 1568-1783	376-86
— of land, corn, meadows, fallows, &c., in 16th-18th centuries	386-92
— of provisions, in ditto	395-6
— of animals, in ditto	396-406
— of linen and cloth, and miscellaneous, in ditto	409-20
PROPERTY (Real), table of annual value of, in the metropolis, 1857	326
PUBLIC SERVICE, competitive examination for the	18
PUBLIC WORKS, notes on, in India (see <i>Sykes</i>)	121
RAILWAY (METROPOLITAN), terminal accommodation and its effect on traffic results (see <i>Wilkinson</i>)	156
— termini, actual effect of central already opened	162-5
RAILWAYS (METROPOLITAN), passenger and goods, mileage receipts, 1847 and 1857	158
— tables of ditto	166-8
— comparison of ditto, of the Great Western with the other metropolitan lines	159-61
RAILWAY (GREAT WESTERN), low dividend of, its cause in faulty position of the Paddington station, &c.	156-7
— traffic advantages enjoyed by	157
REGISTRATION of marriages, births, and deaths:	
Quar. Sept. and Dec., 1857 98, 106 | Quar. Mar. and June, 1858 347, 355	
— Dec. and Mar., 1857-8 202, 210 | — June and Sept., 1858 470, 478	
of marriages, births, and deaths, 1851-57, rate per cent. &c. { 98-100, 202-4 347-9, 471-2	
REVENUE, net produce of, application, &c., in years and quarters ending:	
December, 1856-7 . 110-11 | June, 1857-8 . 363-4	
March 1857-8 . 218-19 | September, 1857-8 . 486-7	
— of INDIA, statistics of (see <i>Hendricks</i>)	228
RIVERS of INDIA, navigation of, by steam trains	180
ROADS and BRIDGES made in India in 1858-5	128-9
ROBERTS (Henry). <i>Report on the Proceedings of the Congrès Interna- tional de Bienfaisance, at Frankfort, September, 1857</i>	339
Notice of its origin, and first meeting in 1856 at Brussels	339
Attendance in 1857, place of assembly and programme of subjects	340
Gold medals for Essay "On the Liberty of Private Charity" and "Intemperance"	341
Enumeration of communications from Great Britain	341-2
Characteristic features of the Congress, freedom from religious discord, &c.	342
Statutes adopted for forming the Congress into a permanent institution	343-4
ROBINSON (Rev. Charles Best). <i>Chronicon Pretiosum Sneathense, or Lists of Prices of Agricultural Produce and other Articles in the ecclesiastical peculiar of Snaith, in the West Riding of Yorkshire, in the 16th, 17th, and 18th Centuries</i>	369
Introduction.—Question as to the reliability of prices in inventories, and reasons for trusting them	370-1
Notice of publications containing information on prices	370 (note)
Difficulty connected with variety in sizes of measures	371
Considerations to be weighed in the comparison of these with prices in other works	372-3
The comparative standard should be in necessities of life, and not in money	374
Area, boundaries, and places included in the Jurisdiction of Snaith	374-5
Table of prices of agricultural produce from 1568 to 1783	376-83
Prices of Corn, Hay, Wool, Manure, Hemp and Line, and Yarn	384-6
Value of Land per acre, Corn, per acre, Meadow and Pasture	386-9
Prices of Fallows, Turbary or Moor-land, and Turf	389-93
Notice of Hunter's South Yorkshire	393
Prices of Wood, Timber, and Coals	393-4
— Provisions: Butter and Cheese, Bacon and Beef, Bees and Honey	395-6
— of Animals: Horses	396-9
— ditto, Cows, Bulls, Heifers, &c.	399-402
— ditto, Oxen, Goats, Sheep	402-4

	PAGE
ROBINSON (Rev. C. Best). <i>Chronicon Pretiosum Sneathense—continued.</i>	
Prices of Animals: Pigs, chickens, geese, ducks, turkeys	405-6
— bricks, boats and nets	406-8
— linen and cloth	409
— miscellanea	410-30
Calendar of the Church, computation of the poor by, in Yorkshire	413 (note)
SADLER (J. H.). <i>Notes on Indian Fibres, illustrated by prepared specimens</i> (communicated by Colonel Sykes)	454
Names, character of growth, and modes of use of various Indian fibrous plants	454-5
Flax in India, immense advantages of its cultivation there	458
SALT DUTIES of India, individual character of, incidence on the poor, &c.	233 281-3
SANITARY ECONOMY of Leeds in 1858 (see Baker)	427
— IMPROVEMENTS at Leeds	432-34
— remarkable example of, at Ely, since 1851	475-6
SCARGILL (E. T.), (see <i>Willick's</i> Tables of the Population, 1851)	297
SEWERS, injurious gases generated from	209
— of London, their innocuousness compared with cesspools	353
SEWING MACHINE in Glasgow, its effects (see <i>Strang</i>)	464
— rapid extension of its use in London, &c.	467
SEXES, relative numbers of, at different periods of life	87
SHIPPING, foreign trade, United Kingdom:	
Jan.—March, 1856-8	216
Jan.—June, 1856-8	361
Jan.—Sept., 1856-8	484
SNAITH, W. Riding, Yorkshire, prices of agricultural produce in, in 16-18 cent. (see <i>Robinson</i>)	369
— area, boundaries, &c.	374-5
STATISTICAL INQUIRIES, recent increase in the range of	1
STATISTICS, Governmental, progress of, in Great Britain	13
STATISTICAL CONGRESS, (see <i>Congress</i> .)	
STATISTICAL SOCIETY, anniversary meeting and report (twenty-fourth), 1857-8	115
— abstract of receipts and payments	120
— proceedings, ordinary meetings; 1st to 8th, 1857-8	345-6
STOCK and SHARE MARKET, fluctuations of prices in:	
Oct. to Dec., 1857	112
Jan. to March, 1858	220
April to June, 1858	366
July to Sept., 1858	488
— ditto, during 1857	114
— ditto of Consols, 1847-56	222
STRANG (John). <i>Comparative view of the Money-rate of Wages in Glasgow and the West of Scotland, in 1851, 1856, and 1858</i>	421
This paper, supplementary as to the effect of the money crisis of 1857, to that published in vol. xx, page 308	431
Wages of cotton spinners, power loom weavers, showing 30 per cent. decrease since the panic	431-2
— of workmen in mines and iron works, showing partial decrease since ditto	429-3
— of engineers and mechanics, quarriers, masons, and carpenters, ditto	423-4
— common labourers and hand-loom weavers, ditto	424-5
Probable temporary character of the reduction, and comparative lower price of provisions in 1858	426
STRANG (John). <i>The Sewing Machine in Glasgow, and its Effects on Production, Prices, and Wages</i>	464
Great increase of, and changes in sewing machines, since the exhibition of 1851	464
Their uses and power compared with hand labour	465
Number in Glasgow, and kinds of work in which used	465
Saving per cent. and increased wages to those employed	466
Facts relative to the rapid extension of its use in London	467
SWITZERLAND, freedom of, from protective duties	457

	PAGE
SYKES (Colonel). <i>Notes on Public Works in India</i>	121
System of management before the establishment of the Department of Public Works	121
Reorganization of Public Works' Department, Directors' despatch, March 1859	129-4
Lord Dalhousie's Minute of July, 1854	121-6
Directors' despatches of May, 1855, and July, 1854	126-8
Outlay in four years on public works, ten millions sterling	128
Roads and bridges made in 1853-5	128-9
Navigation of Indian rivers by steam-trains	130
Canals in N. W. Provinces, (Delhi and Doab,) gross revenues from	130-3
— the Ganges Canal, length, returns and advantageous results	133-6
Expenditure on public works in 1854-5	137
<i>Tables of expenditure under different branches of the public service, and in detail, 1854-5</i>	138-43
— of works in progress, 1857	144
— of expenditure in 1853-4	145-6
— receipts and disbursements on account of railways, 1849-57	147
— irrigation works in Madras, 1836-49	148-53
— East India Railway, traffic returns	154
— Expense of trigonometrical survey of India, 1800-49	154
— Revenue survey charges, 1839-57	155
SYKES (Colonel) (see <i>Sadler</i> on Indian fibres).	
TAXATION of INDIA, statistics of (see <i>Hendriks</i>)	223
— <i>table</i> of direct and indirect, in India, 1855-6	237
— average per head, one shilling, as compared with fifty shillings in Great Britain	238-9
— <i>table</i> of parallelisms of, with the English system	260-2
— of the Punjab, excessive under Runjeet Sing	263
— of Sind, <i>table</i> of taxes repealed by Sir C. Napier, 1843-6	264
— facts and statistics on the progress of British in India, 1792-1856	270-88
TAX (LAND) of INDIA, its nature, reforms, reductions, &c.	229-232
— amount, and ratio per cent. of revenue	278
— account of	284-6
— improvidence of Lord Cornwallis, in permanent settlement of	286-7
— question of redemption of, in Bengal	268-9
TOBACCO TRADE at Leeds	439-40
TOOKE (Mr. Thomas), notice of his death	118
— obituary notice of his career and works	198-9
— committee for raising a memorial (a Professorship of Economic Science in King's College) to, its resolutions, &c.	200-1
TRUVELYAN (Sir C.). Evidence relative to appointments in the Indian Civil Service	23-30
TYPHOID FEVER, account of the outbreak of, at Great Homwood	475
VAN DE MAEREN (see <i>Maeren</i>).	
WAGES, money-rate of, in Glasgow, in 1851, 1856, and 1858 (see <i>Strang</i>)	421
— of cotton spinners, engineers, mechanics, &c., decrease of, since the money crisis of 1857	421-5
— ditto, probable temporary character of ditto	426
— of woollen manufacture at Leeds	435-6
— amount paid in all the trades of Leeds	442
WEATHER, (see <i>Meteorology</i>).	
WHEAT, average prices and quantities sold, 1855-7	{ 101, 205 350
see <i>Corn</i> .	
WILKINSON (William Arthur). <i>Metropolitan Railway Terminal Accommodation, and its Effect on Traffic Results</i>	156
Low dividend of Great Western Railway, and its increase, at expense of the public conveniences	156
Cause of ditto not so much the unremunerative branch lines as the faulty position of the Paddington station	157
Traffic advantages enjoyed by the Great Western	157
Passengers' and goods' mileage receipts for 1847 and 1857	158
Comparison of passenger traffic of Great Western, with other metropolitan lines, showing its disproportionate depreciation	159-60

WILKINSON (W. A.). *Metropolitan Terminal Accommodin.—contd.*

Comparison of goods' traffic, showing the cause of its non-depreciation in the North-Western Railway, though subject to the Great Northern and Great Western competition, to be its goods' terminals in the Minorities	161
Actual effects of central termini already opened	163-6
Calculation of probable actual loss to the Great Western	164
Proposed remedy in a "Metropolitan Railway" from the New Post-office	165-6
Tables of passenger and goods' mileage receipts, 1847, 1857, &c.	166-8

WILLIAMS (Charles M.). *Tables of the State of the Population of Great Britain, in 1851, with a Comparative View, at the different Ages, of the Population of France, and Comparative Returns of Births and Deaths, 1838-54, with Remarks by E. T. Scargill*

297

Statement of the tables, and the authorities whence deduced	297-8
Deductions as to the greater fruitfulness of marriages, and increased proportion of adult males in Great Britain than in France	298-9
Table of comparative state of the two populations, 1851 and 1858	301
— ditto of male and female population of Great Britain	302
— ditto of the unmarried population	303
— ditto of the married population	304
— ditto of widowers and widows	305
— ditto of population of Great Britain and France, at different periods in present century	306
— ditto of births and deaths in England and France.	307

WOOLLEN MANUFACTURE, process, details and wages of, at Leeds

435-6

WORSTED TRADE at Leeds, its decline

436

